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SOUTHERN ILLINOIS NORMAL UNIVERSITY

ANNUAL REPORT

OF THE

PRINCIPAL

1st - 12th
1874 - 1886

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ANNUAL REPORT.
June, 1875

The Principal of the Southern Illinois Normal University has the pleasure to offer to the Trustees and to the public in general his First Annual Report. It is a great satisfaction to know that the people of this section have highly appreciated the benevolence of the State which established this University and have shown this opinion by sending many of their children to enjoy the advantages so generously provided. The numbers in attendance since the first special session in July 1874 have exceeded the large calculations made by friends of the University. As a general rule institutions of learning do not very rapidly attain the power of large numbers. They grow slowly and with many fluctuations: and only after considerable years of comparative uncertainty do they appear to be established in the confidence of the community. While our enterprise has had some lukewarm friends, a few opponents and perhaps, some enemies, it has had so many warm, earnest and enthusiastic supporters, and has seemed so exactly to meet the wants of this part of the State, that it has far thus moved rapidly forward on a tide of cheering success.

It is not always fortunate for an institution of learning to be crowded with students, more especially in its beginning. These may be ill prepared, lacking moral habits and scholarly enthusiasm. Then the larger the numbers the worse it will be for the school. But where nearly every student is manly or womanly or even child-like, brave, truthful, serious and earnest, the more the better, till the full capacity of the buildings is reached, and the teachers are tasked to the utmost of their time and strength. These members are an inspiration and a power.

The building would accommodate more pupils, and we have seats for more in the higher department. But in the Model or Primary School, owing to a lack of furniture, we have been compelled to be crowded and to refuse many applications. The several rooms of the Preparatory School have been so full as to be almost incommoded. We should have at least two more rooms furnished for study, but our Legislators in their desire for economy, have lett us no choice in this matter. We are to go on the next two years with no means to accommodate more of this class of worthy young peop e who may greatly desire an education and whose time for acquiring it will have passed away before we are prepared to receive them. This will be as seems to us a great loss both to the youth and to the State.

The teachers have been compelled to have the charge of six and even seven classss each, and they have labored with great zeal and fidelity and hence been rewarded with the consciousness that they have been honestly endeavoring to do thorough work. For the most part they have received the grateful respect of all, and certainly they have made their several departments highly successful, and they point with pride to the record of the students both in their daily recitations and in their several monthly examinations, written and oral. A better showing has rarely been made, and we congratulate ourselves on having had so many pupils who have shown themselves honest, earnest, and ambitious to learn and to make noble characters by a faithful performance of all duty. The families from which they come have been honored by what they have done and the localities to which they shall go for future duty will be fortunate

The numbers during the year have been as following, viz:

Special Session	51
First Regular Session	147
Second Regular Session	183
Third Regular Session	283
Total	663
The number of individual students has been	403
And	172

Persons have received gratuitious tuition and have pledged themselves to

teach in the schools of the State, provided situations can be obtained with reasonable effort None of these have yet completed the course of study prescribed for graduations, though many of them have taught in the district schools for several years.

The several departments have been well instructed in every case, and mention of any one of them would seem to imply either higher efficiency in it or same degree of inferiority in others. Each teacher has cordially, and promptly co-operated with the President in all respects and each has my hearty thanks. Their labors have made mine not only lighter and pleasanter, but much more profitable to the school: while the careful obedience of the students has rendered the duty of all the officers singularly delightful and far more valuable to the State than it could have been, had the pupils been vicious, idle, dilatory. Only one thing mars the completeness of this commendation. The boys—in some cases young men—have compelled the janitor to do extra work in cleaning buildings. From only a few of the students, and an occasional visitor, has there been a mouthful of tobacco juice or saliva ejected on the floors' though some have for a time persisted in this sort of indignity to propriety. Such ones have tried hard apparently to prove that they had never been decent in their lives, and that their early advantages had singularly neglected by friends and misimproved by themselves. We have this satisfaction however to know that they have made great improvement in the direction of cleanliness. In other points about the University, in the rooms, on the black boards, with perhaps only a single exception, we have reason to commend and have to say that the general neatness and care of furniture could hardly have been better.

The department of natural history has made some progress in gathering specimens. Professor Parkinson has done most of the work in this line, and from various sources, by his own gun, by donations, by purchase he has made a fair beginning of a Museum. Birds, Quadrupeds, and Reptiles have been collected to the number of a hundred or more. Dr. Thomas has received by favor of Prof. S. A. Forbes, Curator of the Illinois Normal University, many valuable specimens of Birds, Shells, etc.,

from the Smithsonian Institution, specimens of Insects and the publications of the Institution, from the War Department's Exploring Expedition ; a large collection of Insects and from the U. S. Northern Boundary Survey; specimens of Natural History, from Prof. Jerome, various specimens preserved in alcohol, all of which make an admirable beginning for the first year, and are all we could have taken care of while we have no shelves or cases properly arranged for them.

The Botanical Cabinet has not been begun The Library consists of Works of Reference and Congressional Documents, and has just been put in its place on shelves. We do most seriously need more books, and the appropriation made by the Legislature, to take effect in July, will enable us to do something toward meeting the wants of the University.

The aim in our work for this first year has been to lay the foundation of a broad culture, yet to make a specific culture the definite object in every department and branch of study. We have sought to accustom our pupils to self-control, to a thoughtful regard for the comfort and rights of others, and to a reverent obedience to law as embodied in the general usages and customs of society and business, and we are proud to say they have not disappointed us. They have been ladies and gentlemen in the true sense of the word. Our care has been devoted particularly to the elementary branches and to discipline in knowledge, science, art, habit health, and exercise. Every student has practised the graceful and inspiriting system of light, free Gymnastics or Calisthenics, has been drilled in Spelling, in Writing, in Vocal Music, and Drawing. While we are dissatisfied with the prevalent notion that these things are of less importance than book learning, we are pleased to know that their value has been recognized and we shall bestow more thought and labor on them in the future. They will hearafter be imperative requirements of all. We are certain that health has been preserved by the Calisthenics and grace of carriage acquired. We have, however, no adequate provision for instruction in these useful things. The several teachers have added to their other duties the work of the Spelling. The Principal has taken the Drawing into his own hand. Mr Brownlee the Singing and Calisthenics, and

Mr. Hillman the Writing, and while these have been profitably done they could have been better done by one who could have given his whole time and attention to them. This ought to be made a special department, supervised by a professor employed for it.

The work of grading the grounds have been provided for in part by the legislature and has proceeded nearly as far as the money appropriated will carry it. While the Principal is grateful for the sum granted he cannot withhold the statement, that after a careful examination and estimate, he asked for this purpose Twenty Five Hundred Dollars. Two committees of the Legislature, one from the Senate and one from the House, visited the institution during the winter and both reported this sum, was if anything to small and recommended its appropriation. But men in that body who had never seen the institution and its grounds insisted that this sum was more than a State such as ours could afford and granted us the sum of One Thousand Dollars. With this sum we shall accomplish something to beautify the grounds, and put them in better order of drainage and surface. But it is probable that for the whole future of the University the place wi l be deformed by this attempt at economy, or else more money will be voted hereafter, than could have finished the whole at once. The same may be said of the fence. Not less than two thousand dollars were needed to make a good enclosure; twelve hundred and fifty dollars are given, and while the fence will enclose the lot, it will not adorn it as it ought to have done. It is a great pity that the people of this end of the state do not demand for themselves, as they and their children need and are worthy to enjoy, privileges of education equal to those of any state in the Union, or at least to those which the Northern section of the State enjoy. What would be the cost? We need in order to do the work for the young of this locality, a sum of say, thirty thousand a year. We are three million people nealry, that is one cent for each inhabitant or two cents for both Normals. Put ours wholly on the population of Southern Illinois, in which we have a million people. and it is only three cents each, or fifteen cents to a family of five persons What a petty cost?

It has seemed proper to make this statement not in condemnation of the legislature which undoubtedly endeavored to do its duty to the peopel, but in extenuation of any blame, which some might attach to our asking so much money and of our failure to secure what we need and what we expected we would readily gain.

Our work is not for ourselves. It is for the people of the State, for their schools and children. We are only interested to have it well done and we are willing to have others do it if we are not found to be the best men. And we prefer not remain if we are incompetent. But we are distressed when a false ecenomy restricts us. It is to the interest of the State to have work of education well done, and for every child.

With these remarks we close by asking all our patrons to send us scholars and to give us sympathy and encouragment.

SECOND ANNUAL REPORT

—OF THE PRINCIPAL OF—

Southern Illinois Normal University.

CARBONDALE, ILLINOIS.

June 14th, 1876.

THE Principal of the Southern Illinois Normal University reckons himself honored by the liberal patronage given to the school during its second year. Hearty thanks are due to the people who have sent their children and wards to our care, and even more credit should be cheerfully accorded to the young men and women who have earned the means to instruct themselves, and who have committed themselves to our guidance. The several teachers are not less deserving of praise for the earnest support they have given to all our labors and for the ability and faithfulness with which they have discharged their individual duties. But above all, devout thankfulness should be rendered to the Giver of all Mercy for His blessing, without which no enterprise can command respect and no labor can win success.

The year has been marked with two difficulties, great stringency in financial affairs, and wide-spread sickness during the Fall and Winter. But notwithstanding these, the comparative numbers of advanced students and their attainments have

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increased. Last year, in all the departments, there were as follows, viz:

Normal	135
Normal preparatory	207
Model	61
Total	403

For this year they have been as follows, viz:

Normal	123
Normal preparatory	208
Model	37
Total	368

This decrease in numbers, as will be seen, is principally in the Model school and Special Session. There are two reasons for this diminished numbers in the Model, neither discreditable to us, and the second very gratifying and hopeful for the city of Carbondale. The fee for tuition in our school has been raised and the people of the city have such an increased confidence in their own public schools, and have employed such teachers, as to make it desirable to send their children to them. It should also be said that while the decrease has been chiefly in the Primary department, in times like these, young men dependent on their own resources are the ones who have been kept away from the school. But notwithstanding this less numbers of names enrolled, we have actually counted a larger number of terms' work than last year. The comparison by terms is very satisfactory. Last year our term aggregates were: Special Session, 54; First Term, 141; Second Term, 183; Third Term, 281—total, 629. The present year our enrollment has been: Special Session, 27; First Term, 226; Second Term, 214; Third Term, 256—total, 723—an increase of 94. This result shows that last year our students remained with us on the average only 1.561 terms, while this year they remain 1.996—a gain of nearly a half term on a student in a single year; and here again the Model room has been most irregular, a fact easily accounted for by the long walk and bad weather of the winter.

The amount of cash received from all sources has been as follows, viz:

Balance from last year	$ 244 94
State appropriations, viz:—	
For salaries	14,100 00
For fuel and repairs	1,500 00
For grading	1,000 00
For fencing Campus	1,250 00
For library and apparatus	1,500 00
From students for incidental charges and for tuition	3,327 00
From rents and other sources	76 10
Total	$22,998 04

The expenses for which the Principal has given certificates for orders have been as follows, viz :

Salaries	$16,100 00
Fuel	293 11
Repairs	938 55
Furniture	300 00
Miscellaneous or incidentals	950 58
Fencing	1,250 00
Grading	1,000 00
Library and apparatus	1,500 00
Extra labor to aid janitor	121 00
Printing	369 50
Trustees' traveling expenses	37 00
Balance undrawn	138 30
Total	$22,998 04

The appropriation by the State Legislature for the fencing was sufficient to build a very good paling fence on two sides and a plain plank fence on the other two. But that for the grading of the ground was altogether insufficient, and the campus therefore remains an unsightly place, quite an offense to the taste. A portion of it has been graded and the teachers and students have, at considerable private expense, planted a part of it with trees and shrubs for future ornament. It is the hope that this ground may yet be graded and made to produce every tree which will grow in this soil and climate. It will then be a means of educating the students in some practical knowledge of Botany and tree culture. A very small annual appropriation would, not only create a large amount of beauty, but might awaken an enthusiasm among the people of this section of the State for inexpensive experiments in tree culture, and diffuse a spirit which might be profitable in many directions.

The appropriation for library and apparatus has all been expended,—divided nearly equally between the two objects for which it was designed, and it affords a good working laboratory for practical analysis in chemistry and instruction in physics. In connection with these objects we have devoted some attention to a museum of Natural History, and have procured specimens of birds, beasts and insects, which make a creditable beginning for work in this department of science. These departments are under the charge of Professors Thomas and Parkinson who instruct their pupils in the actual work of preserving specimens, in dissecting animals and in classifying and arranging cabinets. These parts of our work have been eminently successful, and we look to see our students spread abroad accurate methods of observation and much interest in these matters. This section of the State is, perhaps, as fine a field as is found in the nation for the study of the habits of birds, their

migrations, changes of plumage and times of breeding. Our students, after the training they receive at our hands, will, it is believed, communicate an enthusiasm in this and kindred branches of Natural History and Biology which shall prove invaluable to the commonwealth.

A better opportunity may not occur to reiterate a thought often touched in our exhortations to students. To secure the greatest profit of a course of study, and to reap the highest advantages of discipline, the time devoted to these purposes should be, so far as possible, continuous—a long period of diligent and uninterrupted application till habits of rapid, energetic work and patient self-control are formed and made into the substance of the soul itself. No growth anywhere is made without quiet. The tree constantly beaten by mountain winds is a dwarf; but in the stillness of the deep valley the giant sequoias climb five hundred feet toward the top of the cliff. Great strength, indeed, can be produced only by active strain on the energies. The growth is chiefly in rest: and a school life seeks to withdraw, for a time, the student into a place of calm and peaceful seclusion, where he may give his mind an opportunity to grow and acquire furniture for the future strains and battles of life. Two consecutive terms for this purpose are worth as much as three separated from each other by considerable intervals. And in this connection it is not improper to say that all interruptions of the work of study for visiting or pleasuring do injure and break up the work of a good education far more than is often supposed. The act of study is to form habits, and this end is only attained when the successive actions by which good habits are begotten are blended into a series. To stop study two days, or even a half-day, in a week, breaks the chain of sympathy, disjoints the order, and compels to repeat, till the line which should have been homogeneous becomes in effect broken into strange materials and weak. It is like crystalizing the iron in a wire, which unfits it for strain and makes it often inferior in strength to a cable of hemp.

We ask those who have the responsible care of scholars sent to us to give no occasion by unnecessary absences for complaint on this score. Let those sent to school here, come prepared to remain till they have finished the short courses of study we have set down in our catalogue; and seek to impress upon their minds that the special order we have here prescribed is the best which, after trial, we have been able to devise. And to students we say, by all means begin with the lower and lay a good found-

ation for every thing thereafter. We will give certificates for each year's work done in either of the departments, giving none till the lower has been done with us or satisfactorily accounted for. Our course is so arranged that the Preparatory Normal well finished will be fully equivalent to the requirements of a First Grade Certificate; then one can begin the Normal work proper and go on to become a master indeed.

If we rightly understand the purposes of the Legislature in establishing this school in its present locality, it intended to give the people for their public schools a class of teachers who shall instruct their children by the best methods in all known sciences, and inspire in them the will to learn all new knowledge, and to follow all honorable actions in virtue and nobleness. To prepare our pupils for this work, we have sought three things: to impart accurate information—first, in all the common branches of English learning, and afterwards in practical and advanced science; to habitu te those who are to be teachers to self-government and readiness in thought and action, to careful consideration of the wants of others, and to a cheerful obedience to all law; an finally, to give them a mastery of the methods of teaching—first, by witnessing our examples in the daily recitation, and then by reading and hearing the best plans of school work discussed in lectures and practiced in school duties.

We have been compelled to own that our progress in these last points have not equalled our hopes. Many things might be said here in extenuation of any blame which the public might lay to our charge. Two things shall be named: One, pupils come to us to learn the higher branches as they call them, without having a foundation of the elemental ones; and they have in their minds also a notion that about one-third of a year is sufficient to make them, if not highly accomplished teachers, at least very respectable incumbents of the school room chair of official dignity. Not only do these notions, in the minds of those who come to us, work injury to our labors, but similar ideas in the minds of the people, do us even greater injustice. It is bad that a young man or young woman who cannot spell the commonest words of the language, who cannot speak two simple sentences without errors in pronunciation and in grammar, should imagine himself fit to teach our schools; but if the people become satisfied with him and are willing to accept one who cannot explain the reasons for the common operations in arithmetic, o tell the names of the several United States and their capitals an cities and rivers, or, worse still, who cannot write these names

without fifty errors, the evil becomes far worse, for then the popular demand does not expect anything like excellence or progress. We do not state this to complain, or to find fault, but to prompt the thought of a remedy and a determination to apply one. We think the standard of education and of aspiration is as high among the youth who come to us, as in most other sections of our land; and the appreciation, if not the demand, for excellent teachers is certainly as high as any where we have known. All this, however, will avail little, unless the candidates for the office and emoluments of teacher, and also the people who employ them fix their minds unalterably, and enthusiastically insist on resolute efforts to attain the highest excellence. Students must from the beginning be better prepared and teachers must do this preparation at the demand and under the stimulus of the public sentiment, uttered in such a manner that no one can mistake its meaning, and so that none will dare resist its reasonable requirements. There must be a more thorough early training in our common schools.

The definite professional work of a Normal school has therefore as yet occupied our attention only incidentally. It is not in our case like professional schools for lawyers, clergymen, physicians, chemists, or engineers. If either the orthography of such men, or their grammar, or even their elementary arithmetic—or often all of these—is defective, the men are in some degree rendered ridiculous thereby, but their whole usefulness is not therefore destroyed. A man may become an eminently successful general and an energetic and honored president of the United States and be so ignorant of common astronomical geography as to believe that the earth is flat and cannot turn daily on its axis. But such an one cannot be a good teacher. Neither can he do the work of the school room unless he knows the reason why you carry one for every ten in addition and in multiplication, and why you begin your work at the left hand in division. In our school, therefore, we must insist on the thorough mastery of the elements of knowledge before the methodology of teaching and the science of pedagogics can be taught with any profit. If now the schools of our section of the State will do this elementry work they will aid us in a wondrous degree. And when they do not do this, our duty has seemed to be to insist on elementry training till it is made a fashion and a necessity every where. We appeal to county superintendents to aid in this endeavor, and we feel assured that they agree with us, and would, if their schools could be

supplied with good teachers insist on having such and none others. But, alas, men and women well grounded in all elemental work, are not always in the market, and the law is imperative that a school must be kept; and rather than deprive a given district of its share of public money for the next year, superintendents yield to a seeming necessity, and grant certificates to the imperfectly educated. We are in appearance doing the same thing. Students who have been with us a single term and then only in the lower branches, and with so imperfect a knowledge that we cannot even pass them to a higher grade, go from us and teach, some of them doing better work than the district has before known. While we cannot condemn, without qualification, such students, it is not a course to be approved. And we desire to warn the public that students who have been with us are by no means solely on that account to be reckoned worthy to be teachers; nor will such be a fair representation of our school work. We mean to graduate none who are not at least fair scholars and who certainly have completed with us or elsewhere our course of study, elementary and higher, and who also have an earnest character and a high standard of personal honor and scholarly ambition. We ask the public to judge us by these and not by those who have only been with us too short a time even to have proved that they are grounded in the elemental studies. Do not employ uneducated teachers, and least of all those who have been with us just long enough to have grown conceited on account of their relations to our school, but not long enough to have been taught how little they knew before they came, and to have become inspired with the love of study and the ambition to learn all things. While we bespeak the good will of the public most earnestly and devoutly for our students who shall go forth with our certificate of commendation, we do beg that all conceitedness and imperfect fitting for the work of the teacher in these same students may be as heartily discountenanced. We are glad to be held to the strictest accountability for the work we attempt to do, and we desire that our pupils be held to the same. But we do most earnestly beseech the public to send us those who are fit to begin to learn how to teach.

Let the common branches be well taught at home in your own district schools, and it will save us and you very much money and considerable annoyance. We prefer to prepare teachers for the public schools rather than educate the scholars of those schools, and we think we can most profit the peo-

ple and the State by so doing. Look at this point a little with patience. It will cost a young man or young woman not less than $125 to $250 per annum to attend our school and pay board and travel. If four are sent from one district this amounts to $500 or $1,000. Would it not have been cheaper to hire a teacher fully competent to teach all the common branches in that district and to have had your children learn them fully under your own guardianship? When it comes to Algebra, Geometry, Philosophy, Chemistry, Natural History and Sciences we have facilities which no country district can easily have, and it will be profitable to send to us even if the cost is $500 a year. But for the Arithmetic and Geography and Grammar, these can be more cheaply taught at home, and these branches ought to be taught there as well as we do them. What we ask is to make the district schools so good that the scholars shall delight to learn all common English studies before they come here. And if we can aid in making these country schools such as they ought to be we shall be instrumental in saving to the people of Southern Illinois many thousands of dollars a year. Let it be repeated; we desire to fit the people and the teachers so that the children of our towns may be educated in all elementary learning at home, and thereby save money to the farmers and mechanics, and at the same time diminish the risks to the young attendant on absence from home. This will also increase the love of home and rural life among our population. As circumstances now are we are compelled to teach the most elementary knowledge and to repeat and reiterate spelling, and writing, and reading, and even to teach the addition tables, to those who have for years attended schools at home. We seem to be compelled to do these things, yet we cannot believe they are most profitable for the community, or at least will not be if we are obliged to continue them long. As temporary expedients, and as leading to something better they are allowable.

Our object is to prepare teachers who shall do all this in every school district and thus accomplish what the State designed a Normal should do—diffuse better methods of teaching to the country towns. We can teach your children, good people of Southern Illinois, we believe as well and with less cost than you get the same work done out of the State or in any other section of it. The saving to you even in this way will be thousands per annum. But let us send to you teachers well prepared for their work and we will save you tens of thousands

and give you a far more equally diffused education. We can teach but few of the tens of thousands of children in Southern Illinois in our Normal, but we can, if they will come prepared, teach all those who shall instruct all the children. Do not, therefore, conclude there is no reason for our Normal. The statements above made are the strongest arguments we can adduce for its existence and hearty support. It will, if sustained by a few thousand dollars annually for ten years, make it possible to educate all your children and those of your neighbors at home in the best manner, and provide intelligent and inspiring teachers in all parts of the land. We trust that we shall be supported by the people and in all these matters be aided in our design of making teachers at first thorough and finally skillful in all school work and duty.

Nothing is more vital to our national and social life and in no form of public expenditure produces so much profit at so small a cost as our school work. The average cost of educating a scholar in our school has been to the State $43.81, and when it is remembered that each one of the more than two hundred taught by us who will teach the public schools the next winter, will be actually worth fifty per cent. more to the schools than he would have been without the instruction he has had; and that he will in all probability receive not a dollar more from the public than would have been paid to persons almost uneducated, the profit to the State can be seen. These two hundred young men and women for five months teaching will receive on the average $45 per month, or in all $45,000, fifty per cent of which is $22,500, or in a single year more than the whole of what the school has cost the State. And these teachers will average nearly three years each, which give the State a clear gain of $67,500 for an expenditure of $16,121.04—a paying profit if the work should stop there. But every one of these young people on the average has a life of thirty years of greatly increased value to the commonwealth. So that the school promises to return to the public welfare manifold its actual cost. And another element in this thought ought not to be omitted. The expense of tuition, even when it is largest, is but a small portion of the cost of an education. Board, books, clothes, travel, and other items are several times larger than that which the State contributes to the payment of the bills of the school. This sum the student pays, and in many cases pays it out of his own earnings, not from money contributed by his parents or inherited from ancestors. By offering gratuitous instruction, there-

fore, the State gets a sum probably five times as great added by the pupil himself, and all this is by solemn act, set apart for the uses and improvements of our public schools and brings returns directly to the people, probably thrice its own amount within the space of three years, and in the course of that student's life of thirty or forty years more than twenty fold. What other investment is so profitable?

Our course of study embraces everything from the A B C to the University. We indeed even want a part of this lower in order to make practical application of our instruction in methods of teaching. But we want to devote much attention to professional training; and we have arranged a Post-Graduate Course, which may be devoted to reading and hearing lectures. We now have a very good library of works on the Science of Pedagogy and kindred branches, and instruction will be given in higher Logic, and Methodology, and in Metaphysics, and the Science of Literature and School Laws. Young men and young women who have taught awhile and who desire to extend their acquaintance with these topics will find profitable employment in our Library and Rooms, and can do both themselves and the public good service by reading and studying in this way. The Principal's time can be almost wholly devoted to such hereafter.

Our teachers have done some work at Institutes during the year, and have delivered lectures in many places with good results The Principal has given daily lectures on many topics to the several departments: To the Normal Department one day in three on the English Language; on the order of the Development of Knowledge; on the Methods of Study, and on Methods of Teaching. In the Preparatory Department two days in three on Methods of Study, Importance of Writing and Speaking Good English; on Habits of Neatness and Order; and on the Necessity of Character. In all these departments he has conducted examinations in Spelling, Writing, Geography and other studies. He has also conducted recitations in Logic, in Mental Philosophy, in English Literature, in Moral Philosophy, in Criticism, in Geography, on the the Constitution of the United States, on the School Laws of Illinois, in Methods and in Grammar.

Professor Jerome has instructed classes in both the Latin and Greek languages, reading Cæsar, Sallust, Virgil, Cicero's Orations and Tacitus. He has also read Xenophon's Anabasis, Cyropædia and Homer.

Professor Hull has been in the University a single year and has taught classes as follows, viz.: Algebra—Elementary, Advanced, Geometry, Trigonometry, Surveying, and Analytic Geometry. He has made a fine success of his work.

Professor Foster has taught classes in Geography, Physical Geography, Physiolology, History of United States, Ancient and Modern History, and has had charge of the observations for the United States Signal Service and has acted as Librarian.

Professor Hillman has attended to the Arithmetic and to Astronomy.

Professor Parkinson has instructed in Natural Philosophy, in Chemistry, in Chemical Analysis, and in Algebra, and has given lectures on Chemistry as applied to Art and Agriculture.

Professor Brownlee has had charge of the classes in Reading and Elocution, and has taught the Music and had charge of the Calisthenic exercises.

Miss Buck has taught the classes in Grammar and in Book Keeping.

Mrs. Nash has taught the Writing Classes and the Drawing with large success.

The Model Department has been controlled by Miss Mason and has been an auxiliary of our teaching of great value. The two difficulties—the cost and the irregular attendance of pupils on account of the distance—have made this experiment a doubtful one, and it is not improbable that it may be discontinued. It seems almost a necessity with us that something of its kind shall be maintained, but possibly all the advantages of it as an experimental school can be gained in the other departments of the Preparatory.

This report is submitted to the Trustees and to the public with diffidence but with the thought that as our school is a public institution its affairs and methods, its aims and its accomplishments should all be public. The Principal trusts that his frank confessions will be received in the spirit in which he makes them, and that his suggestions will be candidly and carefully considered and that the public will endeavor to work with our Professors to elevate the character and increase the usefulness of all our public schools.

THIRD ANNUAL REPORT

OF THE

PRINCIPAL

OF THE

SOUTHERN ILLINOIS NORMAL UNIVERSITY

CARBONDALE, ILLINOIS,

1876-77.

THIRD ANNUAL REPORT

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CARBONDALE, ILLINOIS,

1876-77.

The Principal of the Southern Illinois Normal University submits his Third Annual Report to the Trustees and the Public with much satisfaction, though not without a humbling sense of many imperfections in the plans, the methods, and the practical workings of the school. Many difficulties beset every new enterprise, and none rise before any good work in more numerous array and with fiercer opposition, than such as obstruct the line where education is to advance. Some of these are mustered by indifference, some by thoughtlessness, some by cupidity, and some by the impatient desire to realize immediate results from labors—the fruits of which can only mature in distant time. Some are very natural, indeed, and excite neither surprise nor discouragement. Some are too frivolous to be named, though they are not the least annoying. And some only need to be mentioned to be removed by those who have caused them.

Many persons appear to think our school is a place in which to teach boys and girls the simplest elements of knowledge. While it may serve one purpose to have a class or two of small children to show the practice of teaching, these must be used as an experiment, and will, in all probability, suffer. Our purpose should be to prepare enthusiastic devotees of duty for a

life-work of teaching; and this can best be done where minds of nearly equal maturity are brought together with an earnest purpose, and drilled with a voluntary rather than an enforced discipline, both of learning and labor. Too many grades commingled tend to bring the standard down instead of raising it. While this embarrasses us in the school, it may be a temporary benefit to the community in which we are located.

The opposite notion is almost as fatal. For others seem to imagine that our school teaches all the higher branches of knowledge to every comer, whether prepared or not in the lower or fundamental studies. Young people who as yet have no conception of accuracy or completeness in intellectual work, and no fitness even for advancement in the common studies, desire to go through a college course in a year or less. Especially does the impression seem to prevail that a single term spent in a very feeble attempt to master the "higher studies," as they are technically called, or the "Natural Science branches," will give ample qualifications to teach a country school. The lofty standard of excellence, the noble aspiration for perfection, the patient habit of conscientious toil, the deliberate purpose of self-control, from which alone true discipline can grow, are all unknown to too many who seek the teacher's calling. And the community in which these persons live has even a lower idea of a teacher's character and duty.

Such notions, though only partially prevalent, indicate a failure to comprehend the design of a Normal school. They may not wander entirely from the partial truth, but such an incomplete idea of our work, and of the wants of the public schools, may become as fatal as the most thorough falsehood. For unless the elements of knowledge are instilled into the minds of children, no good work can subsequently be performed as it should be; and the country schools are our most important schools. We can therefore propose no better work for ourselves than to exhibit practically the best method of teaching the common school studies.

It is true, that if our public schools are to become what they ought to be, the teachers who are to instruct them are to be filled with all known science, and inspired with ambition to search for all truth now beyond the sight. They should at the same time understand all the best methods of imparting knowledge and of securing obedience, and be themselves flames of enthusiastic fire to melt and enlighten all who approach them. These men and women are to awaken the slumbering energies of the nation, and make noble characters. How can they do it unless they themselves are in the fullest degree alive and burning with love? The sun warms the earth and fills it with life, and attracts and controls its every motion, because it is a million times larger

and warmer. So teachers can only do their whole work when they are many times greater and nobler in learning and character than their pupils. When these demands are made of us, we must own that they are not unreasonable.

But they fatally fall short of a proper conception of our situation if they expect us to accomplish all this, or even a large part of it, in our first years of labor. Our students will remain with us so brief a time; they will, by the necessities of their circumstances, and by the laxness of public opinion, come to us with so imperfect a preparation for the highest study, that we must do our first work more by suggestion and stimulation than by direct labor. Our duty is marked out for us rather by surrounding circumstances than by any arbitrary rules, or even by the proper philosophy of education. We must, by a necessity laid on us by the wants and deficiencies of the schools to be supplied with teachers, impart enough of the higher studies to stimulate all to improve, and enough of the lower to show what ought long ago to have been done; and also to exemplify the best methods of school work. At the same time we are to be required to exhibit and expound the great science and art of education in general, and the practical application of its profound philosophy to the every day business of the common school. In these purposes we have been greatly hindered by several things besides the defective demands of public opinion. The two already named most essential difficulties have been the very imperfect manner in which those who come to us have been educated, and the low standard of attainments set up for themselves and required by the public for teachers in the common schools.

There seems to be no other way to remove such obstacles to our progress and to the advancement of public education but fairly and candidly to set the whole matter before the people, that they may, with us, understand the extent of the danger, and co-operate in its removal. No argument or exhortation will so clearly reveal the defects of our public school instruction, and plead so powerfully for its regeneration, as facts developed by our examinations of candidates for admission into our classes. The most notable deficiencies are in spelling, and in methodic work in arithmetic. Reading, indeed, is not well done, and geographical knowledge is rarely found to be full or tolerably accurate; while practical grammar, as shown by the daily conversation, is as little understood and as rarely used as the rivers of interior Africa. To show the exact state of orthographical practice, the hundred words given below were taken from two pages of the arithmetic, from one page of the grammar, and from two pages of the reading book, all in the most common use in this part of the State, as follows, viz:

1, sometimes; 2, applied; 3, questions; 4, admitted; 5, solution; 6, resort;

7, doubt; 8, close; 9, careful; 10, analysis; 11, following; 12, proportion; 13, contain; 14, quantities; 15, different; 16, related; 17, doubled; 18, necessarily; 19, furnish; 20, answer; 21, remaining; 22, increasing; 23, according; 24, multiply; 25, result; 26, benefit; 27, expenses; 28, diminish; 29, acres; 30, equality; 31, currency; 32, attendance; 33, enrolled; 34, average; 35, difference; 36, quotient; 37, decimal; 38, process; 39, dollars; 40, carriage; 41, census; 42, population; 43, bequeath; 44, cargoes; 45, salary; 46, salaries; 47, pasture; 48, profit; 49, commission; 50, interest; 51, articles; 52, business; 53, principles; 54, percentage; 55, merchant; 56, barrel; 57, sugar; 58, grocer; 59, broadcloth; 60, exercise; 61, adjective; 62, positive; 63, dutiful; 64, future; 65, tenses; 66, prices; 67, agreeable; 68, neighbor; 69, peaceful; 70, harmonious; 71, assure; 72, politics; 73, intimacy; 74, different; 75, penurious; 76, style; 77, fortune; 78, miserly; 79, charity; 80, frugal; 81, economy; 82, evidently; 83, stinginess; 84, valuable; 85, cultivating; 86, entertain; 87, meddle; 88, submission; 89, deigning; 90, especially; 91, inquiries; 92, generously; 93, necessity; 94, suspicion; 95, trifles; 96, civility; 97, vicious; 98, reconciled; 99, judgments; 100, equal.

It should be said that many of these words were not spelled at all—the greatest error that could be made—because of a failure to hear, and of decision in writing at once. We know the excuses for failures, and make very great allowances for them. We can understand, and wish the public to know, that the persons who misspelled are not greatly blamable. Accuracy would have been a credit. This is all. It will be seen that there was no attempt to select "hard words" or uncommon ones. Any scholar who had studied either of those school books or sciences must have seen the words a hundred times. The words were given out so that not more than four were to be written a minute; a person of even moderate quickness can write twenty. A trial was made and one student wrote the hundred words in a little less than five minutes. A half hour was given to the work. The number who entered was seventy-two, and only two spelled every word correctly. The percentage of errors was 39.8, or 40 per cent. very nearly. One young man, 19 years old, misspelled 62 of the 100 words; and one who had taught school under license of a second grade certificate, rose as high on the scale of errors as 54. Among those who have been attending our own school for two years, the percentage was 8, a showing of which we do not feel proud. But when we remember that nearly half that percentage belongs to two students who entered with a record of 44 and 41 errors in 50 words, and now sink to 23 and 18 in the 100, we think we may take the credit of commendable progress in making spelling a success. We are humiliated to be obliged

to state these facts. The public, however, ought to know them, that with us they may demand some degree of proficiency in this branch, both among the teachers and their pupils. Will not superintendents and teachers and parents interest themselves in this simplest, and really most elegant of all our school accomplishments, and see that children early learn to spell? It may be proper that we should show how spelling should be taught—and that practically. But it is not profitable for the State that we should be compelled to do so much elementary work. Yet far less profitable it would be if we should leave this elementary work undone. This is a duty of the elementary schools and for them it may be made a delight. Any teacher who is really worthy of his noble calling can awaken an enthusiasm among young children for correctness in this business almost to a white heat of passion. And how much better would this work be than to attempt in such schools to teach the higher branches? How much easier to teach spelling than the unconnected facts of geography, or the dry details of the grammar? Is the spelling of a thousand common words any more difficult than the endless combination of the multiplication table? Are not the letters of our words fixed almost as those products are by the law of numbers? Then to write a handsome hand, and to keep paper, pen and fingers clean and neat—how easy for a child to learn, and how excellent a part of practical education! and how disgusting is the opposite habit, and how hard it is to divorce a man from it whose life-practice has wedded him to it! Here is one imperative need of our schools and the public must tolerate us in repeated warnings in regard to it. We are sent here to teach those who are to instruct our schools, and we must ask to be allowed to emphasize the important parts of our work and invite co-operation with our efforts. Three thousand words compose the body of our daily speaking and reading. Most of these words are very simple. All can be learned to immaculate perfectness by a month's diligent study of a mature mind. Why do not our county superintendents demand good spelling of our teachers? Shall we be obliged to say to those who come to us deficient in this point that they shall do nothing but study spelling till they know it? We also appeal to teachers. Will they not attend to this work? Is it best for them to neglect children of eight and ten, and let them come to us at twenty, and then be drilled like those in the primary schools? We are willing to do this when necessary. But we submit it to the public that there is a better way, and the people can easily find it for themselves.

We would by no means discourage bad spellers from coming to us. Such persons can make up their deficiencies while here. They can do this before coming, and for them this is more profitable. We can not afford,

either for our own credit or the profit of the people, to allow persons very deficient in spelling to go from among us without having thoroughly convinced them of their imperfections, and having practically shown them the remedy. And we name this one matter a second time in our annual report that it may have the attention it deserves, and may be our justification of so much labor given to the foundation of all accuracy in school work. We also repeat this exhortation and appeal to school teachers and others, and beseech them to co-operate with us and aid us to produce in all our youth habits of perfectness in spelling and in speaking our mother tongue. We trust we shall not be understood as insinuating that the people of Southern Illinois are worse educated or that their schools are inferior to any other section of the whole country. We have seen the evils here named in New England, in New York, and Ohio, in no less glaring prominence than here. Blunders as provocative of laughter and as inexcusable, have been witnessed elsewhere as here. But it only harms ourselves to conceal or palliate our deficiencies. Complete accuracy is our aim, and this can only be attained by a knowledge of our failings, and an intelligent and strenuous effort to provide the exact remedy. In our report of last year I spoke of the comparative cheapness of education at the home of the child so far as the common branches are concerned. That was from the parent's standpoint. And it contemplated a better school in every country school-house, with a better teacher and with more numerous and enthusiastic pupils. There is no reason why the country schools should not be as good as those of the cities and villages, only as it is found in the disposition of the officers and people to accept inferior teachers. Where the best of virtue and sound sense reside there ought to be a determination to have the best schools. And the money annually sent away from some of our country districts would make better schools at home. Then young men and young women coming to us prepared could in a short time gain a higher education. This time our outlook is with reference to our convenience and the profit of our pupils. Our school belongs wholly to the public. All its interests are identical with those of the people and their children. We thrive when the citizens do, and what injures them harms us. Students well prepared for the higher studies, and fired with an enthusiasm to become best and most intelligent teachers, are the most profitable for us to instruct. Are they not also the most profitable for the community to send here and receive back again as teachers of the public schools, where they shall return as flames of fire to kindle every district and settlement in our end of the State?

We present here a statement of the number of our students for the year,

and of the work done by our teachers. The Primary Department was discontinued after the Fall Term:

FALL TERM, 1876.

In the Normal Department	134
In the Preparatory Department	41
In the Primary Department	16
Total	191

WINTER TERM, 1876–77.

In the Normal Department and Special	137
In the Preparatory Department	47
Total	184

SPRING TERM, 1877.

In the Normal Department	190
In the Preparatory Department	73
Total	263
Total for the year, by Terms	638

It will be seen that our number of students is smaller than last year. But this is only apparent. Last year we had 27 Special students, and 37 in the Primary department. This year we had no Special Session in July, and report only three Special students. Our Primary department continued only one Term of this year, and reports only 14 pupils. If these proper deductions are made it will be seen that our Preparatory and Normal students are fully equal to last year. There is another consideration: We have insisted, perhaps to the disgust of some, on the elementary branches as of the first importance, and that these studies should be first mastered. We have, therefore, often advised students to pursue the lower branches, and have turned back many good students simply because their early training was singularly defective. Had we advertised that any student might enter in any place of the course; that any one could graduate in one year; and that every one should be guaranteed employment as a teacher in a good school, we could probably have called together a half thousand at least. But would we have done as much for the State as we have done? Is it better to educate a few in the elements so thoroughly that they will educate others, or to educate many so superficially as to make them conceited? And then would they not go forth to disseminate all their early bad methods and exaggerate every defect? We have thought it a better way to go slowly and teach thoroughly.

The whole number of different students who have enrolled their names is 368; some of these, however, did not remain long enough to matriculate, and they are not included among the names in the catalogue. Of this number those having taught school are 191; and those making pledges to teach are 264. Some will find themselves so illy adapted to the work that the interests of themselves and the public will be best promoted by their choosing some other calling. But the larger portion will faithfully perform their duty and benefit the State in an increased degree in consequence of their stay with us. It will be instructive and interesting to learn from what ranks in the community our pupils come. Our record of their parentage shows the callings of their fathers to be as follows, viz:

Farmers, 381; merchants, 105; physicians, 56; carpenters, 26; ministers, 23; lawyers, 21; teachers, 20; millers, 19; agents, 11; traders, 11; mechanics, 9; fruit-growers, 8; laborers, 8; hotel-keepers, 7; druggists, 6; shoemakers, 5; surveyors, 4; miners, 4; telegraphers, 4; jewelers, 3; blacksmiths, 3; bankers, 2; railroad builders, 2; cabinet makers, 2; masons, 2; manufacturers, 2; engineers, 1; unpholsterers, 1; painters, 1. Total, 747.

Of this 747 there have been in the school the present Term, 263; 236 of the total number have paid their tuition, and the number who have taught schools in our State, as ascertained by actual inquiry, is 336; some of those now in school have taught before coming to us, and are counted as teachers; some of those who have paid tuition have also taught; 48 only of those who pledged themselves to teach have thus far failed to find schools; some of them will eventually teach; nine have died, and twelve of the young women have married, as has been reported to us; seven women and four men had married before they entered the school. Such facts as these are often inquired for by the public, and we frankly communicate them that all may know the whole workings of our Normal School. In the future they will be more valuable than now, and if the collection and preservation of them shall be continued, they will materially aid in making a complete history of the institution.

In addition to the duty of general supervision, I have, during the year, taught classes as follows, viz: Mental Philosophy, Logic, English Literature, Moral Philosophy, Criticism, Constitution of the United States, Illinois School Laws, and Methods of Instruction. I have also given lectures on Etymology, Order of Study, and The Art of Teaching.

I am happy to state that I conscientiously believe the teaching in most of the classes has been above praise, and has met the wants and should command the approval of the community. My associates have been asked to

make written reports to me on their several departments, and they are herewith annexed. Each contains, it is believed, suggestions well worthy of notice, and they are severally commended to the notice of our patrons.

REPORTS OF DEPARTMENTS.

DEPARTMENT OF NATURAL SCIENCE.

BY CYRUS THOMAS, PH. D.

As at present constituted, this Department embraces only the three branches, Botany, Zoology, and Geology ; Zoology falling in the first term, and the other two in the last term of the scholastic year ; but when necessary to accomodate teachers the first is also embraced in the last term of the year.

During the first or fall term, the class contained but nine members : two of these having been excused early in the term, there were really but seven regular members. Although passing at the required grade, the progress made in the science was not wholly satisfactory, three only having an average above 8.2

No urgent necessity appearing to demand a variation from the regular order, no class was formed for either of the above branches during the winter term.

At the commencement of the present (spring) term it soon became evident from the somewhat large influx of teachers, that it would be necessary to form a class in Zoology in addition to the classes in the other two branches, which properly belong to this term.

The class in Botany, which recites the first hour in the morning, consists of thirty-seven members, all very regular in their attendance at recitations. The progress so far made has been quite satisfactory ; and more than ordinarily, even. The attention given has been more than usually marked, and the conduct during recitations good.

The class in Geology consists of eight members, and may be classed as one of rather more than ordinary capacity. As the class after the second week passed into the hands of Prof. Parkinson, you are respectfully referred to him for a statement of the progress made.

The class in Zoology consists of twenty-seven members, all very regular in their attendance at the recitations. The class is largely composed of the same individuals belonging to the Botany class. The progress made, although in some respects better than that made by the Botany class, has not been so regular as I would desire ; but this irregularity applies more to the class as a whole than to the members as compared to each other.

The requirement made at the commencement of the term that admission to the classes should be based upon a knowledge of the preliminary branches has been quite beneficial in its results, not only in rendering the classes more homogeneous and uniform, but also in compelling those refused admittance to pay attention to the preparatory studies in which they were deficient.

In Botany Wood's text book is used, not because it is supposed to be superior to the able works of Dr. Gray, but from the fact that the analytical tables and specific descriptions are fuller and more easily understood by the beginner ; in fact I find the older editions of Wood better in this respect than the last.

In Geology Dana's text book is used.

In Zoology Nicholson's work was the text book first adopted, but it was thought proper the last term of last year to give Tenny's New Zoology a trial. Although adopting some of the advanced steps taken by naturalists in their later work, it was found so deficient in defining the characters of the larger groups that I felt compelled to go back to Nicholson.

In all these branches, but more especially Botany and Zoology, specimens are introduced as a means of illustration as soon as the class is prepared for them, and so far as those needed can be obtained. Analytical work is introduced whenever it is possible with the limited means at hand.

In Botany the text book is sufficient for this purpose, but in Zoology unfortunately the University is sadly deficient. I had hoped that Jordan's Manual would meet this want, but having been restricted by his publishers to a certain number of pages, the result has been to injure very materially the effect.

DEPARTMENT OF LANGUAGES AND LITERATURE.

BY CHARLES W. JEROME, A. M.

In the Fall Term the classes under my charge were the following, viz: Greek Anabasis and Grammar—six members: Cæsar's Commentaries on the Gallic War, and Latin Grammar—thirteen members; The Æneid of Virgil—eight members: Elements of Greek—nine members; two classes beginning Latin, one having sixteen members, and the other having fourteen members.

The Second Term the classes continued in the same studies or advanced to higher authors. The Anabasis class advanced to the Memorabilia of Socrates, and the class in Cæsar advanced to Sallust's Catiline; the students in Virgil read Cicero's Orations; classes beginning the Latin advanced to reading in Roman history, and Latin grammar; and the Greek Elements passed to exercises in reading fables, anecdotes, mythology, legends, etc.

During the Third Term, and at this writing, my classes are pursuing the studies of Homer's Illiad, Sallust's Catiline, Odes and Songs of Horace, Xenophon's Anabasis, Latin reader, and Greek and Latin grammars. During this term a special class in Latin Elements has been organized to accommodate a few student teachers, who are to be with us but for a term.

I have, also, during the present year, had charge of one division of the students in Orthography.

During the year I have had under my immediate supervision, sitting for study in the room, fifty-six different students, most of whom have evinced an earnest desire to make progress in their studies. Students coming from the other departments to my classes in the main have done well—have generally been prompt, orderly, studious and attentive; their conduct, with exceptions of two or three cases, has been all that could be desired; the grades attained by the majority from daily recitations, monthly written examinations and term standings have been most creditable.

The Classical course includes three years of the Latin, and two and two-thirds of the Greek. The English language, as is well known is a mixed one, and embraces words from all the principal languages in the world. The classical elements in our language are so numerous that they form the basis of not less than fifty thousand derivative words. They are so generally interwoven with the composition and etymology of English roots, that a knowledge of them is absolutely indispensable to a thorough understanding of our own vernacular. The teacher of the English language who is familiar with the historic and philosophic etymology of the Latin and Greek elements, is the better qualified for efficient work.

Added to my duties of the school and class rooms, I have performed the labor of Registrar of the Institution; enrolled carefully the names of the students of each term, giving date of entrance, residence, parent's name, date of birth, nativity, etc., collected tuition and incidental fees, and have transferred the same to the Treasurer; have prepared proper vouchers and issued money orders for the payment of all bills of indebtedness, and have kept an account of amounts received and paid out; and have performed such other duties as pertain to the office of Registrar.

DEPARTMENT OF HIGHER MATHEMATICS.

BY JOHN HULL, A. M.

The following is a summary of the work in this department for the year 1876–77:

FALL TERM.

Two classes in Elementary Algebra of	25 pupils
One class in Higher Algebra of	16 "
One class in Geometry of	9 "
One class in Trigonometry	7 "

WINTER TERM.

One class in Elementary Algebra of	10 pupils
Two classes in Higher Algebra of	24 "
One class in Geometry of	15 "
One class in Trigonometry of	5 "
One class in Analytic Geometry of	7 "

SPRING TERM.

One class in Elementary Algebra of	32 pupils
Two classes in Higher Algebra of	18 "
Two classes in Geometry of	22 "
One class in Surveying of	10 "

Total, 17 classes, and 200 pupils.

Prof. Parkinson kindly relieved me of one of the classes in Elementary Algebra during the Fall Term. Deducting this class from the aggregate, the remainder—sixteen classes, with a membership of one hundred and eighty-seven—shows my work in the department for the year.

In addition to the foregoing, I have had one class of 57 in spelling for one term. There have been, also, thirty pupils a term for the year, assigned to my room for supervision and discipline. By itself, the government of this number of pupils would be of very little moment, but added to my other duties, it has seriously increased the labor of teaching.

In the work of my department the effort has been constant to make mathematical science a training ground for the development and discipline of the intellect. Thoroughness and self-reliance have been required of pupils; for upon their thoroughness, decision and good judgment depend their success when they shall become teachers in the schools of the State. Pupils have been thrown upon their own resources as much as possible, and required to assume the position of teacher in the presentation of the work assigned to the class. Their daily success has been made to depend on their ability to give out in good shape what they have learned, and not on their capacity to receive. The work of the year has been a substantial success. A very large part of those under instruction have made decided progress. Some, however, either from entering on too high a grade or from lack of proper effort, will have to go over this work again.

DEPARTMENT OF ARITHMETIC AND ASTRONOMY.

BY ALDEN C. HILLMAN, A. M.

I have the honor of submitting to you the following report for the school year commencing September 11, 1876 :

The First Term we had five classes and ninety-five pupils.

The Second Term, six classes and one hundred and thirty-six pupils.

The Third Term, five classes and one hundred and fifty-five pupils, making in all during the year sixteen classes and three hundred and eighty-six pupils that have recited in this department.

In the Preparatory division of the department the object has been to give a clear and thorough knowledge of all the processes, together with rapidity and accuracy in the work performed.

The great majority of those students that come to us are very deficient in their knowledge of definitions and tables, have never learned to think outside of their text books, and fail when given the examples of every-day occurrence in business, even though they solve the examples of the text book quite readily. Our work, therefore, has been largely to cultivate the thinking faculties, and to arouse the latent energies of the mind.

In our Normal division not only have the processes been thoroughly learned, but not a step has been taken without a full and clear reason being given for it. Original examples by members of the class on every topic, and as far as practicable original definitions and solutions have been required. Much care has been taken to teach the pupils to present their own thoughts upon the topics discussed, independent of books. Only such as have thus mastered the science of numbers can excel in teaching this important branch. Original essays on methods of teaching the various topics were written by the class.

The Astronomy class numbered twenty-five students. The entire book was completed and several lectures were given, the outlines of which were copied by the members of the class. Several night sessions were held to study the location of the constellations and stars. Commendable progress was made in this work.

One division of the spelling department has recited in my room and good results have been obtained. The last term I also taught a beginning class in Latin.

Fifty-eight pupils of the Preparatory department have sat in my room during the year, and nearly all of them have shown an earnest desire to improve.

DEPARTMENTS OF NATURAL PHILOSOPHY AND CHEMISTRY.

BY DANIEL B. PARKINSON, A. M.

During the First Term of the year four classes were taught, numbering in all fifty-seven pupils ; the Second Term, five classes, with one hundred and six pupils ; the Third Term, six classes, with one hundred and sixty-six pupils. The above classes were not all confined to the department specified. During the First Term assistance was given in the other departments by hearing a class in Rhetoric, and one in Algebra ; during the Second Term a class in Grammar, and one in Arithmetic ; during the Third Term a class in Geology, one in Arithmetic and one in Zoology.

The work in Physic has been divided into two grades ; one quite elementary, confined principally to the properties of matter, the first principles of motion, machinery,

pneumatics, acoustics, light, heat and electricity. This grade is designed for pupils in the third year of the Preparatory course, and for those who expect to teach the subject before they reach the more advanced work which is placed in the third year of the Normal course. In this higher work the several subjects are more thoroughly studied, with more mathematics introduced.

In teaching this department the science is made more attractive and instructive by actual experiments upon most of the principles discussed.

The department of Chemistry embraces in its scope the Theoretical and the Analytical; one term being devoted to the former and two to the latter. In the Theoretical the students are made familiar with the symbols, atomic weights, history and preparations of the elementary substances. This prepares them for the Analytical work, which is also preceded by a short drill in processes and manipulations with chemicals and chemical ware. This is followed by the actual analysis of simple and complex substances; each step is carefully watched, and all the deportment of bodies with reagruts noticed, in order that the students may become expert in the work. While our Laboratory has not been as well supplied with chemical appliances as we wished, the students have, notwithstanding, exhibited commendable zeal and enthusiasm; some having remained in the work long after their allotted time had been devoted to the study.

In addition to the above work the spelling of the Normal department has been cared for, numbering, some portions of the year, to seventy-five pupils.

DEPARTMENT OF PHYSICAL CULTURE.

BY JAMES H. BROWNLEE, A. M.

Herewith is submitted my report of the Calisthenic department of the Normal:

I am happy to be able to state, that the beneficial influence of this department upon health and manners is so marked as to have been clearly perceived by the pupils who with scarcely an exception, have participated in and enjoyed these physical, exercises. Mind and body, though mysteriously are intimately related and mutually dependent; and that system of education which provides for the culture of the one to the neglect of the other is faulty; and, from the nature of things, must fail to achieve the best results. Hand in hand with the development of the mind must go the development of the body.

In these exercises we have not so much endeavored to secure to the student great strength of body and limb, as to preserve and promote health, increase capacity of chest, develope symmetry of form, attain grace of attitude and ease and dignity of carriage. We feel that our efforts have been attended with a good degree of success We respectfully submit that a piano is far better suited as an instrument to accompany such exercises than an organ, as by it the accented pulsations of the measures can be more clearly indicated to the ear.

VOCAL MUSIC.

BY JAMES H. BROWNLEE, A. M.

All students are required to be enrolled in this department who cannot pass a thorough examination. The number now enrolled is about 250. Some of our pupils have successfully completed our course, but though they have been informed of this,

they prefer to remain on the roll. The time allotted for study and practice in this art is short, and the classes are necessarily very large, yet some substantial progress is being made. Efficient assistance has been received in teaching from Messrs. Beverly Caldwell, J. T. McAnaly and W. E. Mann, who have each had charge of a division.

Music is taught regularly and systematically, and is not made a means of pleasure and relaxation only, valuable as it is for such purposes, but also of discipline and culture. It has been thought best, under the conditions which now prevail, not to attempt to lead the pupil over too much ground, but to rather aim at teaching thoroughly the rudiments of the science. Our work and that of the Conservatory of Music is, and should be, different. Some of the points which receive attention are the following: Altitude, management of breath and production of tone, measurement of time, distinctness of enunciation, and musical expression; and our students are made to know the score.

The coming teacher will sing. His pupil will have around him the refining and elevating influences of this humanizing art, enriching his voice, perfecting his articulation, educating his eye, improving his ear, and developing and purifying his taste and imagination; while the teacher will have its potent aid in making the school room a place for the exercise of all noble faculties, whose stillness is broken only by pleasant voices, and where discord never comes. He, then, who is fitting himself to teach must learn to sing, and how to teach singing. Then will his pupils be taught. And if the little pilgrims who come under his tuition are sent forth into the great world with voices like a peal of joy-bells, with melody in their hearts, with songs on their lips, how much of its grief will they charm away, and how much less rugged will the way seem to their feet!

DEPARTMENT OF READING, ELOCUTION AND PHONICS.

BY JAMES H. BROWNLEE, A. M.

The number of pupils enrolled for the First Term was ninety-three; for the Second Term, eighty-nine; for the Third Term, one hundred and forty; making the enrollment for the year, by terms, three hundred and twenty-two. I regret to have to say that the majority of those who come under my tuition come not only with much to learn, but worse still, with much to unlearn. Bad habits had been formed which had to be eradicated. Tones, inflections, emphasis and manner, are unnatural while reading, and are in marked contrast to those used in unpremeditated conversation. Oral reading brings into exercise two sets of faculties, viz: the Receptive, by means of which the author's exact meaning is apprehended; and the Expressive, through the agency of which the thoughts and feelings of the author are communicated to another. The chief reason why the majority of teachers fail in teaching the important art of reading is because they permit their pupils to attempt expression of thoughts not clearly conceived by the mind. The Receptive faculties must have been so trained on a selection before the Expressive are brought into exercise that when the work of communicating thought, feeling and purpose to another mind through the eye and ear is begun, the former may do their work unconsciously, and the whole soul be given to the latter. First, understand; then, express. It does by no means follow that one who can grasp intelligently the author's meaning, can adequately express that to another. The agencies of expression—voice and action—may both be inadequate to the task. The ability to comprehend thoughts and feel emotion, and ability to adequately communicate them to another, are different things. But it does follow that without a clear conception of that which is to be communicated, the most cultivated voice and impressive manner are vain. Too much emphasis can not be given to this point.

Thorough attention is given to the Elements of Speech, and the organs are care-

fully trained in their formation ; first singly, then in their simpler and afterwards in their more difficult combinations. Articulation is to the ear what clear type and legible writing are to the eye. It is the first requisite for a good reader. Webster's System of Notation is taught, and the intelligent use of the dictionary as a guide to exact pronounciation is made possible. Classes of words commonly mispronounced are made the subject of special drill. Pronounciation is to be accurate without affected preciseness. Breathing exercises are practiced to increase capacity and develop mobility of chest, and that pupils may gain control of the current of air during expulsion. The voice is cultivated ; its good qualities strengthened, its bad suppressed. Proper attitudes are insisted on, and proper management of person and countenance is required. Good habits must be formed ; rules alone are of no value ; no one reads well by rule, though all good readers read according to rule. The elements of expression are separately considered and their application in the communication of thought is exemplified and practiced. Reading, in a very high degree, is an imitative art ; hence it is our earnest desire that those who are to go out from the Normal to teach the youth of the State the art of reading and speaking well, should themselves be good readers. In all classes attention is given to methods of instruction, and the various methods—word, sentence, sound and alphabet, are exemplified and discussed ; but especially in the higher grades does methodology receive attention. It is hoped that a portion of the work now being done in my department will be done in the public schools. The progress of pupils under my care, while not all I could wish, has been on the whole satisfactory.

DEPARTMENT OF HISTORY, GEOGRAPHY AND PHYSIOLOGY.

BY GRANVILLE F. FOSTER.

During the year seventeen classes have been taught in this department, as follows : Five in Common School Geography, four in Physiology, three in the History of the United States, two in Physical Geography, one in Ancient History, one in Modern History, and one in Meteorology. These branches have been pursued by 379 students, distributed as follows : Geography, 145 ; Physical Geography, 37 ; History of the United States, 89 ; Physiology, 84 ; Ancient History, 11 ; Modern History, 8 ; and Meteorology, 5.

Keeping constantly in view the aims and designs of a Normal school, greater effort than usual has been exerted in this department to prepare pupil teachers of the "Teachers' Classes" in History and Geography for the responsible and arduous duties which will eventually fall upon them. In seeking to accomplish this training of teachers for which Normal schools were chiefly designed, various plans of teaching have from time to time been introduced ; and occasionally, as opportunity afforded, the respective advantages and disadvantages of the various plans have been set forth or discussed by the class. During the time of reviews, pupil teachers have been chosen to conduct class exercises for a short time, while all such teachers have afterwards, alone, been thoroughly criticised, their defects and merits being fully pointed out.

Unfortunately, very few of the students of History and Geography come to these classes prepared for professional work alone, and hence as yet most of our time must necessarily be devoted to imparting that knowledge of these branches by thorough, persistent class drill, without which all mere professional knowledge will amount to little indeed.

In the work in Anatomy and Physiology, much enthusiasm has been created and much knowledge gained by the dissection of animals. It is a notorious fact that the position of the internal organs and their structure cannot be learned with any degree of satisfaction from mere plates, descriptions or lectures, however good these may

be, while it has frequently occurred in our classes that five mintutes work on a rabbit, for instance, have been sufficient to make plain difficulties before apparently insurmountable. In Anatomy considerable attention, too, has been given to Histology, and hence the microscope has been frequently brought into requisition, with the very best of results.

LIBRARY OF THE UNIVERSITY.

BY GRANVILLE F. FOSTER, LIBRARIAN.

In the Library of the University there are 1,853 magazines, school and university catalogues, reports, etc., many of these being full volumes, and 1,908 bound volumes, making a total of 3,761.

During the year donations of books have been received from the following sources: Members of the Faculty of the University, Smithsonian Institute, Patent Office, War Department, Department of the Interior, Signal Service, Swedenborgian Publishing House, Hon. Mr. Hartzell, Hon. Isaac Clements, the late Dr. Wm. Le Baron, Hon. F.E. Albright, Prof. Stephen A. Forbes, of the the State Normal; His Grace, the Duke of Richmond and Gordon, England; John D. Newbegin, Esq., of Jonesboro, Illinois; by Messrs. Scribner, Armstrong & Co., and Messrs A. S. Barnes & Co., to both of which firms we are greatly indebted.

The appropriation made by the last Legislature for the Library of the University was so small that only a few books, those most needed, could be purchased, while nothing was left for shelves, cabinets, tables and other necessary furniture of a good Library. Since the appropriation was made, so great has been the accession to the Library that fully one-half the books now lie on the floor and must so lie until an appropriation sufficient to make suitable provision for them shall have been made.

METEOROLOGICAL DEPARTMENT.

GRANVILLE F. FOSTER, Signal Service Observer; JOHN G. SIMS, Assistant.

In order that this department might be made more effective, during the summer of 1875 a very excellent set of meteorological instruments were purchased in New York, and after all the necessary surveys for ascertaining the height of the station above the normal sea level were made, regular daily observations were begun; which have, without a single day's interruption, been contined to the present time. From October 1, 1875, to June 1, 1876, the observations were taken by the writer, after which Mr. John Sims, for efficiency as a student of metorology and for an especial adaptation for the work, was appointed as Observer, in which capacity he has continued since.

The observations of all the instruments are taken three times a day: At 7 o'clock a. m., 2 o'clock p. m., and 9 o'clock p. m; and after all necessary corrections for various instrumental errors are made, the results are transferred to blanks furnished by the War Department, and at the end of each month the filled reports containing not only the daily readings and average of readings of thermometer and barometer, directions of winds, etc., but also as full and accurate an account as possible of all meteorological phenomena, as thunder storms, meteoric showers, auroras, coronas, halos, etc., are forwarded to the Chief Signal Officer at Washington. It is well here to say that this work has been done up to the ent time without one cent of expense to either the State or the United States.

The object of this work has been two-fold: First, to obtain full and reliable meteorlog-

ical data from which it will be hereafter possible to arrive at some correct and definite views of the climate and climatic variations of Southern Illinois; a result certainly of the greatest possible value to the agriculturist; and second, to give students of the classes in meteorology such facility in the use of the instruments as to make them practical observers. Just now, when this subject is absorbing the attention of the learned everywhere, it is certainly of great importance that the student-teacher should make himself familiar with the laws which govern the wind and weather. Indeed, it would be of incalculable value to the signal service and to science if every district school teacher in the State of Illinois would only purchase such simple and cheap instruments as a thermometer and a rain-gauge, take tri-daily observations and furnish the Chief Signal Officer at Washington with the results.

DEPARTMENT OF GRAMMAR, ETYMOLOGY AND BOOK-KEEPING.

BY MARTHA BUCK.

During the First Term I taught classes as follows: Language Lessons, six members; Etymology, forty members; Syntax, thirty-seven members; Analysis, sixteen members; Book-keeping, five members; Total, 104.

Second Term—Language Lessons, eight; Syntax, fifty; Punctuation (Wilson's), thirteen; Book-keeping, twenty; Total, 91.

Third Term—Language Lessons, nine; Syntax, seventy-three; Analysis, thirty-six; Teacher's Review of Grammar, thirty-two; Total 150; During the year, 345.

My aim has been to impress upon the minds of my scholars the importance of using their knowledge of grammar to rectify their faulty use of the English language. To better attain that end, I have regularly devoted a portion of time to the consideration of the common violations of its laws; and encouraged them to observe and bring into class for correction the incorrect expressions heard by them in daily life. I feel that the larger part of my work could be better done in the nursery. If those who care for the little ones during their early attempts at expressing thought did but realize that a correct form is as easily taught as an incorrect one, the almost hopeless task of breaking up bad habits of expression already formed would be avoided. In the teacher's class how clearly to present the lesson to a class, has been the question of primary importance. I find that the chief obstacle in the teaching of grammar is, that so few understand thoroughly what they wish to teach, or why they teach it. To conclude, I will say that the more attention I give to the subject, the more I am convinced of the importance of beginning early in training children in the use of correct expressions.

In Book-keeping I have sought to give my scholars such knowledge as is practical. I have taught them both double and single entry, the use of drafts, notes, checks, bills of exchange and other business papers. Also forms of protest and how to administer estates, with many other business questions constantly arising in real life; so that as teachers they may be able to be a real help to the pupils who shall be under their care previous to taking places as the business men of this country.

DEPARTMENT OF DRAWING.

BY HELEN M. NASH.

When I first engaged in the work, I did so with the understanding that Drawing was simply an "experiment," whose continuity depended on the degree of success attained during that year. The facilities afforded for conducting the work were limited, and matters gen-

erally in rather a chaotic condition: many of the students regarded it merely as an exercise involving nothing but waste of time, while others expressed for it a decided abhorrence.

To adapt our work to the facilities afforded, to bring order out of confusion, and especially to create a love for the work sufficient to prevent failure, was my aim during the first year. Regarding the success attained I will merely state that Drawing was not abolished.

Number enrolled first year, 175; during the present year 257 pupils have been enrolled. Number enrolled First Term, 75; number of classes, four; number enrolled Second Term, 80; number of classes, five; number enrolled Third Term, 102; number of classes, six; time allotted each class, forty-five minutes daily.

The Second Term I adopted the following programme: Monday—Industrial Drawing, using Smith's System; Tuesday—Botanical Drawing, from Nature; Wednesday—Geometrical Drawing, on blackboard; Thursday—Miscellaneous Drawing, Landscapes, etc.; Friday—Designing. The programme during the present term has varied from the preceding to suit the requirements of the work. Miss Ella Courtney has taken charge of a beginning class including seventeen pupils, and has done good work.

Especial attention has been given to the development of a taste for Industrial Drawing; but as this is not a manufacturing region, considerable difficulty has been experienced in impressing students with a full sense of its importance. I think that branch of Drawing which is best calculated to aid in developing the leading industries of the locality in which it is taught will be most acceptable to the people of that section. Southern Illinois is extensively a flower-producing and fruit-growing region; consequently a knowledge of Botany is highly essential, and the ability to delineate the root, stalk, bud, leaf, flower and fruit of choice specimens is as important to the people of this region as inventive drawing is to the manufacturing population of Massachusetts. Therefore, considerable attention has been given to Botanical Drawing.

Many of the pupils have shown marked ability and in striving to cultivate the special talent of each, the practical uses of Drawing have not been neglected. It is indispensable to the teacher who aims at the highest success in his calling and should go hand in hand with almost every study. Drawing may be truly termed the Foster-mother of the Industrial arts, the Delineator of the beautiful in Nature and the obedient Hand-maiden of the Sciences.

THE MUSEUM.

BY CYRUS THOMAS, PH. D., CURATOR.

The additions made during the year, except to the mineralogical and entomological sections have been but few. But this has been caused more by the fact that we have no means of properly preserving them than from the want of a disposition on the part of the people to contribute. In fact, some valuable specimens have spoiled because we were unable to preserve them with the means at hand.

Although the Zoological specimens are comparatively few (excepting of the insect class) they are valuable and have greatly aided the classes in Zoology in their studies, and have also been used by Mrs Nash, the teacher of Drawing, as objects for training her pupils in drawing from Nature.

The Mineralogical section, which is wholly under the charge of Prof. Parkinson, has received quite a number of valuable additions and with the Entomological section forms the only part of the Museum which has really been brought into anything like system, because they are the only sections provided with any adequate means of arrangement and display.

Notwithstanding this somewhat unfavorable view, yet considering the fact that the collections have all (with the exception of the insects) been made without cost to the State, by voluntary contributions in a section where such an enterprise is new, the progress made is, in fact, gratifying, both as to result and the spirit manifested on the part of the people. The collections consist of Woods—a very neatly arranged "Lignarium" having been presented by Mr. Carver recently; properly mounted and named plants; minerals properly ar-

ranged and classified: insects arranged in suitable boxes, mostly named and partially classified; birds mounted and in hand specimens, those mounted having been prepared by Prof. Parkinson; zoological specimens in alcohol, largely contributed by Prof. Jerome. Besides these there are a number of Indian relics; mammals, mounted and unmounted; fossils; and also a collection of coins in the care of the President which are curious and valuable and do much to illustrate history. These coins are all gifts and they stimulate curiosity and suggest hints to others to aid us. They are as follows: A Spanish dollar of Ferdinand VII., 1821; Spanish quarters of Charles III, 1779-84; English shilling, William IV., 1836; all from Prof Brownlee. Pennies of England and Canada, Prof. Foster. Half-penny token, Canada, S. J. Boren. 10 copper U. S. cents, 3 half-dimes, Spanish 1-16 and ⅛ dollar, two-cent pieces, from R. Allyn. One quarter, Anna; East India ¾ cent; S. J. Boren. Tyrolese coin, about ½ dollar, 173, S. Bond. Spanish quarter, Ferdinand VII., 1815, R. Allyn. Portuguese coin—smooth—Prof. Hillman. Continental bill, six dollars, 1774, Mrs. R. Allyn. Currency Confederate States, 20 bills, Judge J. H. Caldwell. Currency Confederate States, $50, J. G. Sims. Fractional currency of U. S., R. Allyn. 4 thaler piece of Frederick William IV, 1860, Prof. Brownlee. Spanish Quarter of Charles IV, 1783, Prof. Parkinson. French 20 centimes, 1852, H. G. Mertz. 1 quarter dollar, Mexican, 1872, Capt. E. J. Ingersoll. Copy of medal issued by George III, in 1797, in commemoration of victories, Mr. Borger, Carbondale. Canadian half-dime, 1872, Helen M. Hillman, Carbondale.

So far no attempt has been made to collect simple curiosities, or to gather specimens for show, but to collect such objects as will be most useful as a means of illustrating the various branches of Natural History taught in the Institution, and the fauna, flora and geology of Southern Illinois.

DEPARTMENT OF MINERALS IN THE MUSEUM.

BY D. B. PARKINSON, A. M.

During the past year the shelves have been remodeled and rearranged and the greater portion of the specimens classified and labeled. The following is a list of contributors and specimens donated by each. The space allotted to this report will not allow a detailed notice of each contribution:

DONORS.	RESIDENCE.	CONTRIBUTION.	LOCALITY.
E. B. Smith	Carbondale....	32 different specimens.....	N. Y. and N. J.
Dr. O'Hara.....	Carbondale.....	Gold and silver ores.	Canada.
Chas. Roberts..	Colorado	Gold and silver ores.....	Colorado.
Dr. A. M. Lee..	Jackson County	Fossils.....	Jackson County.
Prof. Jerome...	Carbondale. ...	100 alcoholic specimens	Shelby County.
W. F. Hughes.	Carbondale	Indian relics.....	Jackson County.
Green Williams	arbondale.....	Indian relics.	Jackson County.
H. W. Happy....	St. Louis.....	50 different specimens.....	St. Louis, Mo.
J. G. Allyn.....	St. Genevieve Mo	Copper ore.....	St. Genevieve, Mo.
Jas. Brownlee .	Carbondale .	Iron ore.....	Lake Superior.
Jas. Brownlee..	Carbondale..	Gypsum	Lake Michigan.
Jas. Brownlee...	Carbondale	Pebbles.....	Lake Michigan.
John Hayden...	Carbondale.....	Fossil limestone.....	Jackson County.
Lizzie Sheppard	Carbondale.....	Fine variety of coal.....	
J. H. White....	Marion	Silver ore.....	Montana.
J. H. White....	Marion	Iron Nodules	Texas.
Prof. Hillman..	Carbondale	Gold and silver ore.....	Colorado.
Clark & Topham	Golconda	Galena ore?.....	Hardin County.
Prof. Foster....	Carbondale.....	5 Fossils.....	Winnebago Co.
Chas. Neeley...	DuQuoin.....	Salt and Gypsum.	DuQuoin Salt w'ks
Dr. C. Thomas	Carbondale	Gypsum crystal and moss agate.	Colorado.
B. H. P. Eaton	Boulder City....	Cluster of stalactites	Union County.
Dr. R. Allyn..	Carbondale	Pebbles from Cape Ann, Mass.....	
Miss Baxter ...	Carbondale	Fern impressions.....	Jackson County.
John Martin....	Carbondale. ...	Coarse Granite	Jackson County.
John Sims.....	Carbondale.....	Coarse Granite	Jackson County.
B. F. Baker ...	Makanda.....	Fossils.....	Jackson County.
Mr. Anderson..	Carbondale.....	Indian relics....	Jackson County.
J. J. Rendleman	Makanda.....	Alabaster.....	Niagara Falls.
D. B. Parkinson	Carbondale.....	A number of minerals	Carbondale.
Wm. A. Karr...	Marion	Indian ax.....	Williamson Co.

Some contributions in Natural History might be noticed here:

DONORS.	RESIDENCE.	CONTRIBUTION.	LOCALITY.
Rev. R. Z. Fahs	Kane	60 varieties of wood from Pulaski Co.	Southern Illinois.
Prof. Brownlee	Carbondale	Carapace of turtle	Mediterranean Sea
Lula Sheppard.	Carbondale	"Night Hawk"—mounted	Carbondale.
G. A. Walker..	Troy, Tenn.	Owl's claw	Tennessee.
Jas. Brownlee..	Carbondale	Botanical specimens	Maine.
Isaac Dillinger..	Carbondale	Large stuffed rattle snake	Near Carbondale.
Isaac Dillinger..	Carbondale.	Indian tools and ancient bones, money	
D. B. Parkinson	Carbondale	A number of birds..	Carbondale.
J. B. Cetend	Carbondale.	Specimen of Grand Tower Marble	

ACADEMY OF SCIENCE OF SOUTHERN ILLINOIS.

BY GRANVILLE F. FOSTER, SECRETARY.

The Academy of Science of Southern Illinois owes it origin to the exertions of the Faculty of the University, and of Professor Cyrus Thomas, Ph. D., State Entomologist, and one of the United States Commissioners of Entomology. After considerable correspondence a call for a meeting was issued, which was held at Carbondale on the evening of December 2, 1876. The objects of the Academy are as follows: To investigate and study, (1) the Ethnology and History of Southern Illinois, including its Antiquities and Aboriginal Remains; (2) the Geology, Botany, and Zoology of this section, and (3) to encourage generally the production and preservation and publication of original papers on the above, and on special, philosophical, mathematical, astronomical and meteorological subjects, as well as on the origin and meaning of the names given to localities by the Indians or the first settlers of the country.

To promote these purposes the Academy is organized into departments each of which may act separately or in connection with one or more of the others. The departments are: 1, Ethnological; 2, Historical; 3 Geological; 4, Botanical; 5, Zoological; 6, Philosophical; 7, Mathematical; 8, Astronomical and Meteorological, and, 9, Microscopical. The constitution also provides for County Auxiliary Academies, the presidents of which are vice presidents of the parent society.

Since the commencement of the year, a committee composed of Robt. Allyn, D. D., Principal of the University, and Prof. D. B. Parkinson, have made several exploration of mounds, yielding a large number of Archæological specimens. In addition to these the Museum has been enriched by several valuable donations of specimens which space forbids us to name in detail. At present a part of the rooms devoted to the Museum of the University is used for the Museum of the Academy.

The officers of the Academy are as follows: T. M. Perrine, Esq., of Anna, President; Prof. Granville F. Foster, Secretary; Cyrus Thomas, Ph. D., Curator of Museum; E. J. Ingersoll, Esq., Treasurer; Chairmen of Departments as follows: Ethnological and Philological, Dr. Robt. Allyn; Historical, Prof. G. C. Ross; Botanical, Prof. G. H. French, of Irvington; Zoological, Cyrus Thomas, Ph. D.; Geological, J. H. Engleman, Esq., of Belleville; Philosophical, Prof. D. B. Parkinson; Mathematical, Prof. John Hull, and Astronomical and Meteorological, Prof. Alden C. Hillman.

FOURTH ANNUAL REPORT

OF THE

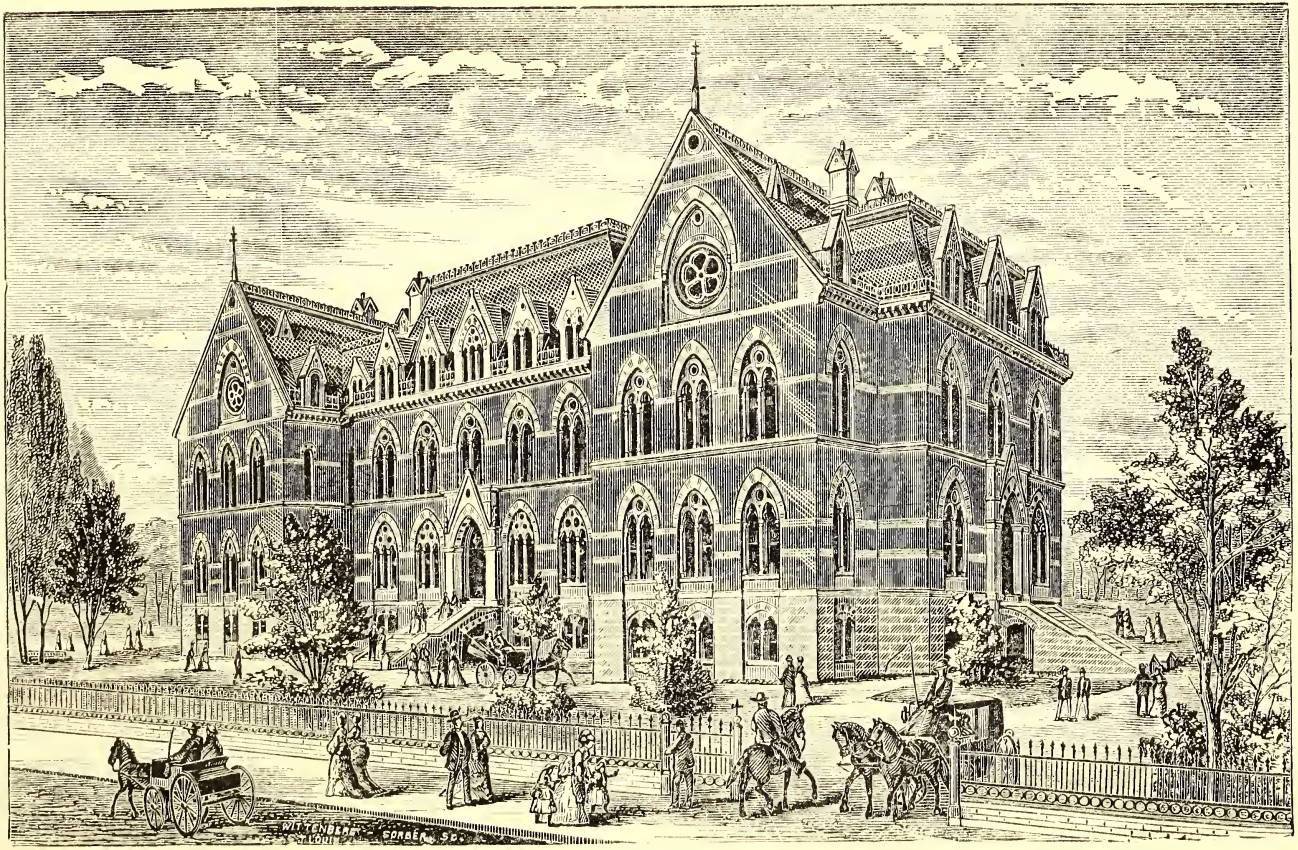
PRINCIPAL

OF THE

SOUTHERN ILLINOIS NORMAL UNIVERSITY.

1877-78.

CARBONDALE, ILLINOIS.
OBSERVER PRINT.
1878.



To the Board of Trustees

of the Southern Illinois Normal University.

Gentlemen:

I have the honor to make my Fourth Annual Report and can most sincerely congratulate you on the condition of the University under your care. It has steadily grown by the blessing of a kind Providence in numbers and in usefulness. Both teachers and students have enjoyed good health and have been able to discharge their duties promptly and with fair success. The numbers have been greater than at any other time, and their stay in the school has been still more increased. The average time of the students who were with us the last term is more than a year. Heretofore we have been able to reckon no more than about two terms for those of any particular period.

The numbers have been as follows, viz: Fall Term 230. Winter 266. Spring 254. Total by terms 750. The number of different students has been 408—more than last year by 68—and exceeding any previous year. Since the opening of the school there have been 999 students in all the departments. There has been an advance in every line. In the Normal Department and Special students there have been 135 against 112; in the Preparatory 273; the Model has been abandoned. It will be remarked that our Normal department is small in comparison with our preparatory. This is chiefly owing to our practice of placing our students in the lower grades till the higher work has been carried. More than one half of those named in the Preparatory have done some work belonging to the Normal, but not having finished all the Preparatory studies they are still numbered in the lower department.

We have kept a record of the callings of the fathers of these students and here insert it as a point of interest to our patrons. It will show that our institution is aiding the country population, and the great substantial and virtuous middle class, the farmers more than all others, to secure good facilities for giving practical education to their children. Offspring of Farmers 536, Merchants 128, Physicians 72, Ministers 33, Carpenters 28, Lawyers 25, Teachers 25, Millers 21, Traders 14, Agents 12, Laborers 11, Mechanics 10, Hotel Keepers 7, Shoemakers 5, Tele-

graphers 5, Editors 5, Miners 4, Fruit Growers 4, Civil Officers 5, Engineers 4, Livery Stable Keepers 3, Jewellers 3, Cabinet-Makers 3, Contractors 2, Manufacturers 2, Book Keepers 2, Clerks 2, Tinsmiths 3, Blacksmiths 3, Upholster 1, Tobacconist 1, Grocer 1, Banker 1, Mason 1, House Painter 3, Harness-Maker 2, Machinist 1, Saloon-Keeper 1.

We have ascertained from our record and careful inquiry that 511 of the number have taught since their connection with us. Many of these students have done their work successfully, both in our school and where they have been engaged as teachers, and thereby have proved the value of the course they have pursued. When it is remembered that the teaching of each of these has been considerably improved above what it would have been had he not been with us, we can draw an inference as to the value of the school to this section of the state. Still it is to us a matter of regret that so few of the teachers of our public schools are in earnest to acquire a thorough preparation for their business. This may result from two causes, either of which will account for it, and both of which make an unpleasant suggestion as to the immediate future of our schools. The wages paid to teachers are too low to warrant them in making it a life calling, and the small amount of attention given to the schools by the people themselves affords incompetency an opportunity to hide itself for a long time, and inflict large damage on the minds of those under its care. The fact that more than the half of our students in these four years have been employed to teach schools, is we think creditable to us and goes to show the necessity for such an institution and that school officers appreciate our work.

In a former report I spoke of the imperfect preparation of those who enter our university. This is again alluded to in the reports of several of our professors accompaning this. This no doubt is chiefly owing to the unskillful teachers employed in the country, but is in part due to the lack of a public demand for accuracy in scholarship and a desire on the part of the student to hasten on to higher studies. An improvement is already noted and it is hoped it will increase greatly in the future till we shall be relieved wholly of teaching the very rudiments of knowledge. To encourage thoroughness has seemed to be our duty. We desire that such elementary studies may be learned at home where they may be had at less cost and will be more likely to abide in the mind. We urge parents who contemplate sending their children to us to give attention to their early training. A child ought at twelve to read, and spell and write fairly, and should accurately know the whole of the geography of his native state, and of the United States, and the ground rules of arithmetic, and especially the multiplication table, and then be ready for something else. Let scholars come to us ready for the higher studies and the schools at home will improve and do better work.

I refer to the reports of the several professors for a brief account of the work done in their respective departments. In cases of my absence during the year Professor Hull has been in charge as acting Principal and has

done the work to the eminent satisfaction of his colleagues and myself. In addition to the general supervision of the school I have instructed classes in

Mental Philosophy	8	passed	8.
Logic	15	"	12.
Moral Philosophy	7	"	7.
Æsthetics	11	"	10.
Constitution of United States	17	"	14.
School Laws of Illinois	19	"	15.
Pedagogics	9	"	9.

And I have delivered lectures on Reading and Methods of Study and Teaching More students and those better prepared have been in our higher classes

The General Assembly made ample appropriation for our current expenses and gave us sufficient to make valuable additions to our Library, Museum and Apparatus. The books added count more than a thousand, and have already been of essential service to both professors and students. The same may be said of the apparatus. It has enabled us to give better illustrations of the principles of science than was possible without it. It may now be truthfully said that a beginning has been made in the work of collecting and arranging a cabinet and Museum—a thing impossible before because of our lack of cases and shelves. The specimens already number some thousands and facilities for mounting and showing them will stimulate the zeal of our students and friends to donate and enrich our stores of scientific and antiquarian curiosities. Our section of the state is rich in opportunities of gathering material to illustrate ancient history and ethnology and we are now prepared for its study.

The new steam heating has so far been a success in every particular. It has afforded abundance of heat and fresh air without dust or inconvenience. The winter has been mild and perhaps an opportunity to test it properly has not yet occurred. But from its work in the few cold and windy days of the season we judge there will be no difficulty in keeping our rooms at a temperature of 65 when the air outside is at zero.

This matter of Normal Schools so intimately concerns this section of the state and indeed is so joined to the policy of the whole school system that it may not be improper or unprofitable to spend a little time in the consi eration of it. And this is the more necessary just now when our enterprise is comparatively new and when it has been so favored by the large majority of the people, though questioned by the few. Any public affair or institution which expends the money of the people gathered by impartial taxation ought on suitable occasions to justify itself to that people. The facts alluded to in the first part of this report and in the reports of the professors appended, as to the number of students taught, the callings in life from which they come, the numbers who have engaged in teaching, and the better work which they have done—not better than others have done, but better than they would have done—when put

together go very far to prove the usefulness and even the necessity of this Normal School. But the question ought not rest on this one school, but on the general principle of such schools. Hence I state the point more fully.

The men who study the great problems, How to educate the nation's offspring in the best manner and with least expense of time and taxes, as well as of thought and labor, have with singular unanimity reached one conclusion, that some system of Normal School instruction and training is, if not a necessity, so far an advantage as to justify large expenditures, to secure the establishment and efficient operation of such agencies. So concurrent have been these enlightened judgments of competent, educated philanthropists, that schools of this kind have been opened in Europe for almost a century, and more recently in large numbers of our states and cities, almost without discussion, and they are now carried on at much outlay of means, with far less of question and doubt than almost any of the philanthropic charities of the age. It has therefore happened as might have been predicted that, so soon as the discovery was made that they cost vast sums of money, a controversy has been started, as to their necessity, their propriety, and even as to their usefulness, their place in the educational system, and also as to their appropriate work. While such a discussion is not wholly unforeseen and is by no means unwelcome to the friends of these schools, it is unfortunate in one respect. Not to have been raised until now seems to imply a failure on the part of the schools themselves. Had it occurred before their establishment opposition would then have been silenced on principle. It is now to be overcome by facts—the only effectual way to settle a matter of expediency and profit. The facts given in another part of the report have it would seem demonstrated the need of our Normal School and its right to live. At all events such a controversy affords an opportunity to canvass again the design or plan and the results of Normal Schools. In the present discussion it is simply proposed to speak of these points as of practical importance to the community at large. A word is sufficient as to the theory of Normal Schools. The current opinion, formed with one glance at their design, is that they come in after a fair knowledge of the branches taught in our public schools has been mastered. Obviously they should teach methods of work in the school room, and should afford some opportunities of acquiring additional science and of forming excellent characters. All this implies information imparted and discipline previously gained by the pupil who enters the Normal school. But an earnest attempt to teach methods alone in any science or art will soon convince one that these two things learning a science, and finding the method of that learning, are not so easily separated as a first thought might suggest. Indeed to learn a matter for one's self is really one of the best ways to prepare to teach it and to learn its method also. In fact, learning and teaching coincide in so many points that they do indeed become one direct pathway,

straight to knowledge, and it matters less which is traveled first than how carefully and studiously the journey is made.

The favorite method of experiment supposes the pupil to do the work in order to learn how both to fix its knowledge in his own mind and how to communicate it to other minds. In practical experiments the teacher merely directs the experiment and the pupil performs it for himself. In such cases the methods of learning and of communicating knowledge are practically identical. Who will not recall the maxim: "One never knows a thing till he has told it to another." Carlyle uses the same thought often, and Emerson quotes: "speak that yourself may know how much or how little you do know." Looking now at this logical philosophy, which scarcely admits a challenge or even a question as to its truth, we shall be compelled to say that Normal Schools cannot wholly be segregated from the work of all other schools and set apart for the sole teaching of methods so called until the lower or knowledge-giving schools have become nearly perfect. Until that day comes much of their teaching must be found in giving instruction in the actual book knowledge which their students will hereafter be called to teach. Or at least they must have preparatory departments.

At the same time, however, they are to give to their pupils opportunities to try their skill in communicating science and in gaining control over others. But this experimental teaching will be rather more in the nature of a review to themselves than as an indepenent presentation of that knowledge. Yet even in this latter point of view they will of course do something, first in order to give illustrative examples for observation and second to afford practical test of ability on the part of the normal pupil. According to these statements Normal Schools are shown to be little more than another order of schools with a completer course and a more thorough drill, with a wider range of investigation and discovery, with a practical opportunity to review all studies for the definite purpose of learning how to direct the minds of others in the way of learning the same and other studies. The objection now springs up, if such is the purpose of Normal Schools, why not provide that the scholars learn all this in the High School proper, without the extra expense. They are to be taught the same branches in the same manner, and it is asserted that the learning is in good part its own instruction in methods. What then is the use of the training school? This is a common question and is often the common view of the design and work of Normal Schools. In defense of it men say that practice and philosophy sustain it, and however much another plan might be desired for them, other schools have so poorly done their work that Normals must supplement it. Granted that this is partially true in both directions, and then there is a higher purpose and work for them. The objection just stated is one of the most superficial and it has availed to attach Normal departments to almost all schools in the land—than which few things are more detrimental to the school itself and to education in general. I am not

pleading for such, nor arguing against them. I am speaking for the real and thorough Training School for teachers, already in most respects filled with knowledge such as children need and can acquire, and such as will profit the whole community. And I am fully convinced that distinctive Normal Schools—doing little else than teaching methods and awakening enthusiasm are the most needed and will be the most profitable of all to any commonwealth. Their advantage will be much every way, even on the lower plans named, that of imparting facts; and on a nigher plan hereafter to be considered they are invaluable. But chiefly that it brings together a large body of young people enthusiastic on the subject of acquiring knowledge for a practical end, and of habituating themselves to the work of communicating that knowledge to others. These need to become inspired with a common purpose or aim, to be taught not only how to learn, but how to learn only good, and to learn this fastest and with least loss of time and means. Such persons will learn self-control much better in company with those having like pursuits in view, than in any other schools whatever. The common ideas of future use to be made of their acquirements will be to each an inspiration better than they can find elsewhere.

But in the higher plan of proper Normal School work or that strictly professional, the learning of the philosophy and method of teaching, there ought to be a necessity for a liberal course of study and drill. The branches of knowledge are sufficient for one series of schools. And these can be better taught by means of division of labor. There is enough for one class of schools to teach men how to impart knowledge and especially how to conduct and manage a school. Does it not need a knowledge of how to bring a cause into court, how to prepare the pleadings, and to conduct the whole of the suit. Does it require less to know how to present truth to the young mind? Does the one who simply learns thereby know how others learn? Is not this the great difficulty with teachers? They know that they have learned, but how they themselves learned it, or how another can learn, they do not know. Hence they fail. There is a need for something more than a mere study of the text book. Something of art and method is needed. It is for this purpose that a thorough teachers' course should be established, and it should take in scholars who have learned all else and give them a knowledge of the methods of teaching.

This is what Law Schools, Medical Colleges and Theological Seminaries accomplish for their pupils, and it is always eminently satisfactory. They gain in these places more advantages from the one aim with which all study, than they derive from all their books and perhaps from all their lectures. They associate with men high in their profession, crowned with honor by the age in which they live, enthusiastic in a given line of study but more absorbed in a particular line of duties; and they are also inspired by example and by precept, till they, as pupils, are moulded by the same spirit of the specific calling into the highest

types of excellence in their intended profession. Besides they grow into a nature different from their ordinary state and become crystallized into the permanent character of the noblest of callings. The whole tendency of such schools, when separated from others, and their natural influence is, by the associations formed, to elevate the ideal standard of personal excellence which every one who enters the road of a specific calling should attain.

Will not Normal Schools be far more valuable for this work and influence on the souls of their pupils than for all else? Any attempt to join a Normal School and a High School or College, damages the characters of those whom it attempts to train normally, as it is called. So of a Normal Department in a University. There cannot be a single purpose, and a school with a double purpose is not likely to be a success. These appendages are easily taken off and the loss is hardly felt. But to attempt to develop one of them into a head or a hand could never be expected to succeed.

The answer to this objection has in a very short way demonstrated the uses of Normal schools better than an argument. It is apparent from the nature of the case that they must exist as independent organizations if they are to do best work for the community and provide the needed leadership for the people, in their efforts to educate all the children of a community, to an extent the highest possible, consistent with the well-being of the race. The subject, perhaps, might be safely and profitably dropped here were it not for the continual question, asked twice as often as answered, and always asked with such a confident and sneering positiveness as gives it all the force it has. What is the use for a state to educate its teachers at all? Why not allow every man who desires to be a teacher to educate himself as a lawyer or a doctor? Or as a member of Congress or a statesman trains himself to serve the people and lead the affairs of the world? Well, since this cry comes like an uneasy ghost every time the sun goes down, and nightly screeches itself hoarse, let it be in part answered again. What is the use of having a leader at all? Why not trust the instincts of human nature as they rise in every child's mind, and let every one of the human race go to its own destiny as the animals or fishes do, without a guide or controlling force? Let every one find what is good for himself or desirable and let him have it all to use or destroy as his strength may help him? Why not fall back on the savage method of finding leaders when they are needed, by individual cunning or prowess forcing itself to the front and compelling all others into submission to its selfish lawlessness? Or in other words, why not truse wholly to nature—which is, as Buchner phrases it, but another name for accident—to produce not only servants, and sailors, and soldiers, but military commanders, and religious teachers, and civil officers as well? We do occasionally trust to just such accidents, or to self-constituted demagogues, to give us municipal officers; and especially in our large cities Tweeds show us examples of the results. These men now are be-

ginning to control our public school system by nominating and electing their creatures to the places of trust, and those who are not fully corrupted are beginning to speak out in denunciation of the wrong done to the children of the state. In the neighboring commonwealth of Ohio a faithful officer estimates that the haphazard, party-machine method of choosing school officers, and giving them control of the examinations of teachers, is already wasting at least one-half of the money gathered from the people by means of taxation. We are ruled by demagogues and not by educated, or disinterested, or even honest men. The nation's forethought and philanthropy must rally and unite and give us the control of our resources and of our future, or else the selfishness of base men will give us death and destruction. Our thoughtful educated men must combine to find for us skilled and noble leaders, or baseness and vice will give us traitors and paracides. It is trained leaders in education or ignorant demagogues of ruin. We must have masters in virtue, or tyrants in vice. Which do we choose? These latter will grow to our hands as weeds or predacious animals. The former like grains and fruits, or domestic cattle and tame beasts of burden, can be had only after careful attention and assiduous culture.

We have begun in our two schools—Military and Naval, at West Point and Annapolis—to prepare leaders for ourselves in war. And the result has twice proved their priceless value. What are we doing to secure the far nobler, though by no means easier victories of peace? Carnot once said: "We must organize victory in war." Is there any less need of organism in the much broader and far more fertile fields of peace? After the seeming destruction of Prussia at the battle of Jena in 1806 and the pursuits of her troops which followed, Baron Stein undertook to organize distant supremacy in Europe for Prussia by establishing by system the universal right of the children to education and their duty to military service. Every peasant became enlightened and trained, and a soldier. In seventy years the results appeared, and to-day Prussia has arisen to be the keeper of the peace for the continent. These schools which educated the peasants' children to be the most intelligent and therefore the strongest soldiers, began with Normal schools to train teachers for the children. And, a high authority declares that Prussia owes more to her schools and to the training schools than to her King and nobility and parliament all together. These schools have been so excellent chiefly because they have been carried forward by a body of men who have been trained together and taught enthusiasm in her Normal schools, numbering nearly a hundred in her borders.

Our Normal schools are to supply us leaders in our greater warfare against ignorance. But we have not yet made them a necessary door to the great profession of teaching. We do not allow that it is at all imperative on a candidate for the school teacher's office, to have any higher knowledge or skill than his pupils. But we do not permit a second lieutenant to command a platoon of soldiers, even on parade, without a

military education, such as shall give him an enthusiastic spirit of devotion to his profession, and we send a man who absolutely has no professional training or affinity for his work, to assume the responsibilities of moulding the human mind and soul! A midshipman dare not command a boat's crew without a naval education; yet a boy or girl may govern and instruct a house full of children, without the slightest technical or scientific culture. Such an one may sit down upon and blight all the hopes of a neighborhood by the wrong or imperfect training he will give to their offspring. We install in the holiest office one who enters on his duties as a mere makeshift—a sort of place in which he can earn money to get out of it.

No more need be said of the use and value of Normal Schools. If they are not needed, as Mr. Lincoln said on another occasion, nothing is needed to prepare men to teach others. If skillful labor is not a value and a necessity in teaching, then the proper training or instruction of children is of no value to a community. Horses may need careful and skilled grooms, but children need no care whatever. If the ignorant, the vicious, the lazy, the egotistic and impecunious are to have the right of teaching whenever they can induce an illiterate or a selfish community to hire them, and this to the exclusion of the honest and industrious, then our schools will soon come to be so near a farce as to more than justify the assertion already alluded to that half our public funds devoted to education is wasted. There is no other way to make the education of our children the best and to make it universal, but by giving to the calling of the teacher due honor and proper professional skill. We can do this only by gathering the youth who are willing to devote a life to such work in schools, where they shall acquire ambition and become filled with the knowledge and spirit of their noble calling. Then shall we have a class of men always at hand to lead in the good way of disciplining our offspring in science, virtue and nobility. The cost of this to a district has been spoken of elsewhere. Normal Schools will pay fully their cost to any community.

The faculty after careful consideration and much study of the wants of our schools in Southern Illinois, have decided to recommend the adoption of a Course of Study purely professional, Normal or Pedagogical. This is done in order to bring the University into the line of work which such schools or seminaries originally or technically were designed to perform. It will be seen below that it will embrace the Science and Methods of teaching and will be conducted by Lectures, Examinations, Observations, Experiments and Criticisms, and will be similar in some respects to what are called Clinics in Medical Schools. It will embrace three grades or years, though it may be completed in less time. If a student is fully prepared in the several branches he can give his entire time to this work, but if he is deficient in some, he can enter what may be called our Academic classes and complete those studies.

The Course will embrace the whole range of Pedagogical topics—the Child—the School—the Knowledge--the Discipline - the Teacher - the Methods of gathering, preserving and communicating, of classifying, generalizing and inferring; in short, it will attempt to seek two kindred purposes—teaching how to learn and how to impart; to accumulate and diffuse. This we think teachers need to learn after having learned science. It will also embrace the history of education, and its literature and the various systems of schools in other countries. The progress of the student will be tested by oral and written examinations and at the close of the course a certificate will be granted specifying the particular course completed We have already had something of this in our Post Graduate Year and we bring all this into one single course and consolida e the whole. If one comes to us and desires the most horough possible preparation for the teacher's work, both elementary and higher, he can begin in our classes and review all our studies. He can if he chooses dispense with many of the lower and show himself fitted for the higher work and enter upon it at once and complete it on such oundations as he may have laid in the c mmon schools or elsewhere.

Such is a very imperfect outline of what is intended. To enter upon it the student should be prepared to pass an examination on all the subjects required by law for a first grade certificate, and to do this with even more thoroughness than is commonly demanded. It may be well to state more fully what will be required in order to enter on the several courses of professional study. This is done that the plan may be understood and that teachers may know how to prepare for it.

FOR THE FIRST COURSE.

1. In Orthography the test will be one hundred and fifty words selected from some daily newspaper printed in St Louis or Chicago on the day previous to the examination. These words to be dictated at a rate not less than five a minute and to be legibly written with due regard to the rules for capitals.

2. In writing a test like the following, write and punctuate an advertisement from the same paper and a paragraph of news or editorial, both dictated by the examiner after the candidate has read them aloud.

3. To test the ability to express thought a composition will be written of not less than thirty lines of common legal cap, on a topic assigned at the time by the examiner.

4. Reading ten minutes from one of the common reading books of our schools and an oral statement of the sounds of the letters and the effect of pauses, accent and emphasis.

5. In Geography the common definitions of terms, lines circles and some general account of countries, especially the boundaries of the several United States, our mountains and rivers, cities and railroads. To this should be added a few points of historical interest

6. Arithmetic as far as through roots, with special attention to the

reasons for the fundamental rules and principles, of fractions and decimals, percentage and analysis.

7. In Grammar the test should be Etymology and Syntax, definitions and practical use of correct constructions, including correction of errone us sentences.

8. United States History should be known as to the settlements, the Revolution and the succession of Presidents and our wars.

After these examinations have tested the student's knowledge, he will superadd what has been called Theory and Practice of teaching, or Didactics, or as the Germans name it Pedagogics. It will include this in two departments, Practical and Theoretical The Principal's chief attention will be devoted to the latter, and he will be assisted by Prof. Hull in the former. Books will be read and the knowledge thus gained as well as that imparted by lectures will be tested as has been said by examinations. School laws and systems will also be reviewed. In short the purpose will be to give a complete knowledge of the details of the teachers profession and the general knowledge of this science of education, as well as something of the philosophy of learning and imparting.

THE SECOND COURSE

will require a preparation equal to that required for a State certificate.

1. A higher test in English composition, say an essay of three hundred words on some school topic assigned by the examiner at the time and prepared for the press.

2. Grammatical Analysis of sentences and Prosody, with the philosophy of the parts of speech and Etymology of words, as well as an analysis of idioms.

3. Algebra as far as Quadratics and Binominal Theorem and Plane Geometry.

4. History of United States with considerable minuteness as to the Revolution and its principles and those of the war of 1812, and our Civil War. Also the History of England in brief as to the period of discoveries and settlements, the Revolution of 1688 and the Reform Bill of 1832.

5. The several branches of Natural History, as Botany, Zoology, Physiology, with a fair degree of thoroughness. This will include the classification and definitions and an ability to determine genera and species.

6 Natural Philosophy and Astronomy in their common principles and important applications, and Chemistry so as to be able to explain the phenomana of combinations and analysis of the common salts; and in addition the theory of electricity, magnetism and heat.

This examination will be a fair test of the ability of the student to acquire knowledge, and of the facility he may have to communicate information. With this he will then enter on a higher course or reading and will have lectures taking perhaps Rosenkrantz as the basis of comment and exemplification, and giving more full and particular atten-

tion to the various modes of teaching the several branches, and to the philosophy of governing and inspiring by motives adapted to different ages of the scholar.

THE THIRD COURSE

will have requirements the same as the Second, adding Latin Grammar and ability to translate Cicero and Virgil with clearness and grace, and in Mathematics Trigonometry and Surveying and Logarithms.

Rhetoric, Logic, Mental Philosophy will be considered in these Courses of study and lectures on these as well as on elocution and English Literature. History will come in for its share of attention and something of Criticism and Philosophy. Opportunity for chemical work in the laboratory so that one or even three years may be profitably filled with the business of the course. And further there will be instruction and practice in taxidermy and dissection, in mounting specimens and in arranging and classifying and systematizing the knowledge acquired.

We offer this course to the public as our contribution to professional education proper and are ready to meet the demand for such a beginning of higher Normal training. If young men and young women will enter on it with enthusiasm we can carry them along this very important line of work, so that they shall enter on their life duty with better habits and better promises of success. They will have taken time to revise what they have learned with a special view to putting their minds in the best condition to impart it to others. And further they will have joined themselves to a living body of fellow workers, enthusiastic in the cause of education, and will in part be inspired and included with the strength of all. The community now looks to lawyers, as a body, for opinions and leadership when constitutional questions are discussed; to ministers when ancient faiths are in jeopardy and when the foundations of morality are undermined; to their physicians when plagues and pestilence are let loose among men; and should they not turn to teachers when ignorance and vice league themselves in shameless disregard of human interest and right? Should not these be trained in their professional duties and massed together so as to be able at all times to mind the same things and walk by the same rule? Education is among the most profiting things in the community and the most sacred interests of society are not above it. It needs defenders and allies quite as much as our army or navy needs officers. What we propose will aid the commonwealth to mass and drill these intellectual and moral leaders and train them into skill and wisdom. Our schools are for the education of the offspring of the whole land. Our children are our noblest possession and chiefly because of what we can make them to become. Let us not entrust them to ignorant teachers nor to those wholly inexperienced in the work of their calling. They can be educated rightly only by the best men and women of the nation, and these the best trained of any scholars in all the land. The best of teachers edu-

cated in a full knowledge of human nature and of science and practiced in their noble calling, will hardly cost more than inferior ones. The price of a first rate man or woman to teach all branches well will not exceed $750 a year for a whole district containing forty scholars, and he will teach all these and several of the higher ones. An inferior teacher will cost not less than $350 and will neither teach all branches nor teach them well. When this district wants a scholar well taught or trained in higher studies he must be sent from home at great cost and danger. One scholar sent from the home exposed to many temptations will cost $250 a year. Is it not cheaper for the district to hire the best teacher and educate the children at home till they are well up in knowledge?

This contribution we purpose to make to the prosperity of Southern Illinois—to give to it teachers who can at a comparatively small cost, educate its children at home and better than they could be educated abroad, at a large cost. And we are seeking also to make those teachers out of the children of this section of the State. We cannot but flatter ourselves that this is a work of patriotism, and the results of our four years work as teachers in this University appear to us to have been highly useful. In the more than five hundred whom we have, in part, trained and who have taught in the schools of this locality we think we have some proof of the benefits of the school. Not all of these have been good teachers. It would be an anomalous state of affairs, in this imperfect world, if five hundred persons should be found going from one place for one duty and every one a success. But the large majority, by the testimony of directors and parents of children, have succeeded to a greater degree than has been common.

These few words are said in order to explain our work and its effects. We desire to be judged by our fruits. All we do is open to the public. Many of the people have sent children to us and have visited our school. We are grateful for all the favors we have received. We trust for a more hearty cooperation. We are proud that ours is a school for the people and we have not a doubt but that they will demand its continuance and liberal support. Yearly it will grow and the discipline it will give will be better and the advantages derived from it will become of more value to those who attend.

Appended are reports from the professors of the several deartments. These touch many points of interest and suggest many ideas valuable to the cause of education. I invite particular attention to them all.

In accordance with an opinion of the Faculty I recommend that the Fall Term be continued fifteen weeks so as to bring our Christmas recess at the end of it. This will make it necessary to diminish the number of weeks in the other terms. As the harvest season each year has seriously interfered with the examinations at the close of the year and as the present year, more than half of our students have been called

home for farm labor, I suggest that the following changes be made in our arrangements.

Fall term begins 2nd Monday in September and continues 15 weeks. Recess of two weeks the holidays.

Winter and Spring session begins 2nd Monday in January and continues twenty weeks.

Summer session for Special Natural History work and Institute. 3rd Monday in July, five weeks.

Rates of Tuition ought to be modified as follows: viz,

Fall Tuition	$9	Incidentals	$3
Winter Tuition	6	"	2
Spring Tuition	6	"	2
Special Tuition	5	"	0

The following persons have passed through our Course of Studies and after careful inquiry and proper examination are recommended as Candidates for Graduation and the award of Diplomas: viz,

IN THE CLASSICAL COURSE.

MISS DELIA CALDWELL,
MR. CHARLES E. EVANS,
MR. JOHN T. McANALLY.

IN THE SCIENTIFIC COURSE.

MR. ALVA C. COURTNEY,
MR. JAMES A. HANNA,
MISS ORCELIA B. HILLMAN,
MISS SARAH E. JACKSON,
MR. GEORGE KENNEDY, Jr.,
MISS MARY C. McANALLY,
MR. EDWARD R. PIERCE,
MR. RICHMOND PLANT,
MR. EDWARD H. ROBINSON,
MR. DAVID G. THOMPSON.

Respectfully submitted in behalf of the Faculty.

ROB'T ALLYN, Principal.

Department of Natural History.

CARBONDALE, ILL., June 10th, 1878.

DR. ROBERT ALLYN, Principal S. Ill. Norm. Univ.

DEAR SIR: During the Term which is now closing I have had under my charge four classes; one in Botany, two in Geology and one in Zoology. The two in Geology were in reality parts of one class, but on account of conflicts in studies, reciting at different hours.

In Botany there were 49 members, but 16 of these were transferred to the second or B Class in Botany under Professor Parkinson; 4 were excused from recitation at their own request, sufficient reasons being given. This left a class of 29 members most of whom were very regular in attendance to the close of the term.

Counting the two Geology classes as one, there were 17 members, all very regular in attendance until the graduates were excused after the second monthly examination.

In the Zoology class 27 members entered, but three of these were afterwards excused by request, leaving a class of 24 members, most of whom were regular in their attendance until near the close of the term.

The Botany class progressed well and all except two will pass on their grades.

In Geology the progress was more than usually satisfactory, not a single member failing to pass.

In Zoology the case was quite different, the attempt was made to have the class study topics, as our text book is too extensive for one term's work, but a large portion of the class consisted of new students who were unprepared for this kind of work, the consequence has been that not more than one-half the class will pass. Still I believe they have a more general and comprehensive knowledge of Zoology than they would have obtained by following closely the text book, and perhaps received even higher grades.

CYRUS THOMAS, Prof. Nat. Sci.

CARBONDALE, ILLINOIS, June 11, 1878

DR. ROBERT ALLYN, President S. I. N. U.

DEAR SIR: All additional matter I have to report to you in reference to the museum may be briefly stated as follows:

During the year three floor and two wall cases have been completed and are now in use. The floor cases are used as follows; one of the smaller for geological specimens and Indian relics; the middle and largest for minerals; the other small one miscellaneous specimens. The two wall cases are devoted entirely to birds and have been neatly arranged by Prof. Parkinson who has undertaken the taxidermy for the museum, and has worked it with an enthusiasm which deserves great praise. A number of additions have been made to the museum, of Indian relics, specimens of natural history. As soon as I can obtain time to do so it is my intention to prepare a detailed catalogue of all the specimens and contributors, but this cannot be done until the names of the natural history specimens have been determined.

In addition to the contributions several important things as typical birds, skulls, etc.. have been purchased.

Very Respectfully,

CYRUS THOMAS, Curator.

Department of Ancient Languages.

Annual Summary of the Classes and Work in this Department for 1877-78.

FALL TERM.

One class in Greek Rudiments	6	Pupils.
One class in Caesar and Latin Grammar	18	"
One class in the Æneid of Virgil	7	"
One class in Zenophon's Anabasis	7	"
Two classes in Latin Elements, A and B	38	"

WINTER TERM.

One class in Greek Rudiments and Grammar	6	Pupils.
One class in Caesar and Sallust	13	"
One class in Cicero's Orations	7	"
One class in Memorabilia of Socrates	7	"
Two classes in Latin Reader and Grammar, A and B	38	"

SPRING TERM.

One class in Zenophon's Anabasis	6	Pupils.
One class in Sallust's Catiline	13	"
One class in Tacitus de Germanial	7	"
One class in Homer's Illiad	6	"
Two classes in Latin Reader and Grammar, A and B	28	"

Total 18 classes and 207 pupils

The students of this department have evinced a commendable zeal and earnest desire to make progress in their studies. They have, generally, done well - have been prompt, orderly students and successful. The grades attained by a large majority from daily recitations, monthly written examinations and terms standings have been creditable. Most of the students in this department have passed to higher studies. A few, whose attendance and habits of study have been so irregular, have grades that will not admit them to advanced classes. Several students have been called home by their parents, and h ve thus interferred with the number and progress of class work.

The classic course includes three years in the Latin and two and two-hirds of the Greek. Its design is to prepare teachers for the High Schools of the State. The English language, as is well known, is a mixed tongue, embracing words from all the principal languages in the world. The classical elements in our language are so numerous, that they form the basis of not less than fifty thousand derivative words. They are so generally interwoven with the composition and etymology of English roots, that a knowledge of them is absolutely indispensable to a thorough understanding of our own vernacular. The teacher of the English language who is familiar with the historic and philologic etymology of the Latin and Greek is all the better qualified for efficient work.

Added to my duties of school and recitation room, I have performed the labor of the Registrar of the Institution; have enrolled carefully the

names of all the students of the different terms, giving date of entrance, residence, parent's or guardian's name, date of birth, nativity, etc., and have transcribed the same to the University records; have collected all tuition and incidental fees, and have transferred the same to the Treasurer of the Institution. I have prepared all proper vouchers in duplicate, and issued all money orders on the Treasurer for the payment of all bills of incidental expenses and other indebtedness, and have kept an account of amounts received and payed out, and have performed such other duties as pertain to the duties of the office of the Registrar of the University.

Respectfully submitted,

CHARLES W. JEROME.

Department of Higher Mathematics.

The following is a summary of the work in this department for the year 1877-78:

Elementary Algebra,	E, three classes,	93	69	35
" "	D, two "	39	29	17
Higher Algebra,	C, one class,	32	31	20
" "	B, one "	30	23	19
" "	A, one "	18	17	13
Geometry,	B, two classes,	21	16	11
"	A, two "	22	19	15
Trigonometry and Surveying, one class,		12	11	10
General Geometry, one class,		10	10	10
Calculus, one class,		5	5	5
Practical Pedagogics,		30	27	27
	Aggegate	312	257	182

Each of the classes in the foregoing statement continued for one term. Column (1) shows the number enrolled; column (2), the number at the close of the term; column (3), the number successful in their work.

Prof. Parkinson taught one of the classes in geometry during the fall term. It was a class of three preparing for the trigonometry. For the same term, I had charge of the pupils in the Normal Hall one hour each day, and joint charge with Prof. Hillman during the time of spelling.

The trigonometry and surveying required two hours each day. The calculus is an elective study,

The membership of the classes in this department was larger by fifty per cent than it was last year but has not been successful in quite as large a ratio, though the larger per cent passed, will be seen.

The following outline will show what each of the classes named in the tabular statement has studied.

ELEMENTARY ALGEBRA, CLASS E.

Literal notation; addition, subtraction, multiplication and division; use of the parenthesis; factoring; divisors and multiples; fractions; simple equations of one unknown quantity.

ELEMENTARY ALGEBRA, CLASS D.

Ratio and proportion; simple equations with two and with three unknown quantities; fractional and negative exponents, radicals; quadratic equations.

HIGHER ALGEBRA, CLASS C.

Literal notation; addition, subtraction, multiplication and division; factoring; divisors and multiples; fractions; powers and roots, including radical quantities.

HIGHER ALGEBRA, CLASS B.

Simple equations with one, with two, and with more than two unknown quantities; ratio, proportion and progression; quadratic equations; inequalities.

HIGHER ALGEBRA, CLASS A.

Intermediate coefficients; binomial formula; logarithms; intermediate equations; interpretation of equations; general review.

GEOMETRY, CLASS B.

Rectilinear figures; the circle; proportional lines and similar figures; comparison and measurement of the surfaces of rectilinear figures.

GEOMETRY, CLASS A

Regular polygons; measurement of the circle; maxima and minima of plane figures; planes and straight lines; solid angles; polyedrons; cylinder, cone and sphere.

TRIGONOMETRY. PLANE.

Solution of plane triangles, etc., with special application to land surveying; actual use of surveyor's transit and chain in making examples.

TRIGONOMETRY. SPHERICAL.

Solution of spherical triangles, with special application to the surface of the earth.

GENERAL GEOMETRY.

The determination of the equations of the straight line, the circle, the the parabola, the ellipse, and the hyperbola, and the geometrical properties of these lines.

CALCULUS.

Definitions and notation; differentiation of algebraic, logarithmic, exponential, trigonometrical and circular functions; successive differentiation and differential coefficients; functions of several variables and partial differentiation; development of functions; evaluation of intermediate forms; maxima and minima of functions of one variable.

PRACTICAL PEDAGOGICS.

School sites; arrangement and advantages of school grounds; plans for graded schools; objects of graded schools; studies for the different grades; school houses, furniture, apparatus, and records; temporary and permanent organization of the school; objects of study; proper and improper incentives to study; modes of study; characteristics of the student; objects and requisites of the recitation; preparation for and methods of conducting the recitation; school ethics; rewards and punishments; means of correcting and of preventing disorder.

School Law. Appointment, dismissal, qualifications, examination, licensure, and conditions of payment of teachers, and such other matters as directly relate to their work.

Respectfully submitted,

JNO. HULL.

Report for the Departments of Physics and Chemistry.

During the past year three classes have been taught in Natural Philosophy. The one in the fall term being "Third Year Normal" used as a text book, Norton's "Natural Philosophy" supplemented by many practical problems. The class taught during the second or Winter term was of a lower grade than the above, using as a text book "Cooley's Elements." The design of this kind of work is to prepare pupils for an examination as teachers in our public schools; also to prepare them for the higher grade of study in the Normal department.

The class which has been taught the past term is styled the "Teachers' Class;" designed for many compelled to teach during the first and second terms; and who can attend our school only in the Spring term. From the fact that many who enter this class have never taken any elementary work the grade is an intermediate one.

The facilities for giving instruction in this department are much improved since last year, by the addition to our apparatus of a Spectroscope, a Compound Blowpipe and the introduction of gas into our building. The gas is perhaps of more convenience and economy to the departments of Chemistry and Physics than to any others. Formerly alcohol was our only source of heat for work in the Laboratory and on the Lecture table—which proved very expensive and at times very inconvenient, especially in the use of compound blowpipe and Sciopticon. In fact the introduction of gas into our building has opened a new era in these two departments; and so highly are the advantages appreciated that we take this opportunity of expressing our gratitude to the Board of Trustees for such an acquisition to our facilities now quite complete for doing successful work.

Chemical Analysis has been carried on during the entire year. By means of the Bumsen Burners the work in this line is made much more pleasant and rapid. With this exception but little change has been made since last year. The same guide book—Johnson's translation of Fresenius is used. In addition to this each pupil has before him a diagram of method of procedure taken from Attfield's Chemistry. A number of private analyses have been made; one of some mineral waters from Georgia; several for Dr. Roharts.

Since there is no elementary class in Descriptive Chemistry the work done in one term is necessarily hurried and unsatisfactory. To meet this difficulty it is recommended that a less extensive work be used in the above class, and require all graduates in the Scientific Course to take one term's work in qualitative analysis. This need not occupy more than one hour per day in the Laboratory, yet it would supplement their previous study of chemistry as to make them much better teachers of Chemistry.

As our course is now arranged but one term's work is required, which is giving less time to this branch of science than is given to any other except that of geology.

To carry on the Qualitative analysis necessitates some little expense in the purchase of chemicals &c, yet during the past year it has been very light indeed. Only such subjects and examinations have been presented as seemed of the most practical value. Our principal outlay heretofore has been for alcohol, but by using the Bumsen Burner instead of the Spirit Lamp a great saving will be made.

The class in Descriptive Chemistry was taught in the Winter term using Youman's text book. This book has proved rather too voluminous for our class of pupils without some elementary work. It is now contemplated that a change will be made to that of "Morton's Elements of Chemistry." By requiring an additional term's work in Qualitative Analysis to follow this the knowledge of Chemistry acquired will be much more satisfactory than at present.

Desiring that our pupils be as far as is practicable, familiar with the new inventions of the day a Telephone has been rented—the lease extending from March 9th, 1878, to March 9th 1879. While this instrument may not be a permanent one in our list of apparatus, so much interest has been attached to it that it is considered of great advantage to the department.

Before closing this report attention should be called to the fact that both our Physical and Chemical Apparatus are being injured by exposure to dust which necessarily accumulates upon them unless protected by suitable cases.

The following is a brief summary of the classes taught in the departments referred to; also of classes belonging to other departments:

Classes.	Members.	Passed.
Fall Term.		
Advanced Natural Philosophy	28	18
Analytical Chemistry	5	5
Rhetoric	20	14
Geometry A	3	3
Winter Term.		
Descriptive Chemistry	14	11
Analytical Chemistry	3	3
Elementary Nat. Philosophy	68	40
Arithmetic B	34	16
Spring Term.		
Teachers Nat. Philosophy	44	30
Analytical Chemistry	5	5
Botany B	22	15
Physiology B	41	32

In addition to the above work charge has been had of a part of the spelling with regard to correcting books and keeping a record of work done. As the system of spelling has been explained in other reports nothing farther seems necessary.

Respectfully submitted,

D. B. Parkinson.

Robert Allyn, LL. D.,

Principal Southern Ill. Normal University,

Sir:—I herewith submit reports for the departments of English Literature, Elocution and Reading, Vocal Music and Physical Culture in the order of their mention.

I.

English Literature.

During the year just closed the class in this delightful branch of education has, for the first time, been under my tuition.

The enrollment has been as follows:

1st Term	28	left class	3	passed	20
2nd "	25	" "	4	"	17
3rd "	20	" "	1	"	19
Total	73		8		59

It has been our primary object to awaken and foster in the minds of the students a love for the best books, and to this end copious extracts and selections from the best authors have been read orally, by myself or members of the class, their beauties noted and sources of strength pointed out.

The chief text book has been "Shaw's Outlines," but Rolfe's Editions

of "Julius Caesar" and of the poetical works of "Goldsmith" have been used with good results.

The pupils have with scarcely an exception shown an earnest interest in their noble language and its grand literature and a desire by the study of the best models of English prose and poetry to improve and refine their taste and acquire for themselves a correct English style. They have been often required to furnish essays on carefully studied topics and thus have acquired facility in the use of language so essential to the formation of good style.

II.

ELOCUTION AND READING.

There has been but one class in elocution during each term of the year, and the enrollment has been as follows:

1st term	35	left class	2	passed	31
2nd term	26	"	7	"	17
3rd term	35	"	12	"	12
Total	96		21		60

In class A in reading there were enrolled:

1st term	27	left class	3	passed	23
2nd term	39	" "	11	"	23
3rd term	25	" "	11	"	14
Total	91		25		60

In class B were enrolled:

1st term	32	left class	6	passed	22
2nd term	31	" "	5	"	23
3rd term	8	" "	4	"	4
Total	71		15		49

In class C, which continued for only one term when it was merged into class B there were enrolled 18; left class 6; passed 9.

The average number of pupils per term enrolled in this department is 92, and in this and the department of literature 116⅓.

The enrollment by terms is 349, an increase over the last year of 27.

I regret to have to say that many of those who come under my tuition come not only with much to learn, but worse still, with much to unlearn. Bad habits have been formed which have to be eradicated. Tones, inflections, emphasis and manner, are unnatural while reading, and are in marked contrast to those used in unpremeditated conversation. Oral reading brings into exercise two sets of faculties, viz: the Receptive, by means of which the author's exact meaning is apprehended; and the Expressive, through the agency of which the thoughts and feelings of the author are communicated to another. The chief reason why the majority of teachers fail in teaching the important art of reading is because they permit their pupils to attempt expression of thoughts not clearly conceived by the mind. The Receptive faculties must have been so trained on a selection before the Expressive are brought into exer-

cise that when the work of communicating thought, feeling and purpose to another mind through the eye and ear is begun, the former may do their work unconsciously, and the whole soul be given to the latter. First, understand; then, express. It does by no means follow that one who can grasp intelligently the author's meaning, can adequately express that to another. The agencies of expression—voice and action—may both be inadequate to the task. The ability to comprehend thoughts and feel emotion, and ability to adequately communicate them to another, are different things. But it does follow that without a clear conception of that which is to be communicated the most cultivated voice and impressive manner are vain. Too much emphasis can not be given to this point.

Thorough attention is given to the elements of speech, and the organs are carefully trained in their formation; first singly, then in their simpler and afterwards in their more difficult combinations. Articulation is to the ear what clear type and legible writing are to the eye. It is the first requisite for a good reader. Webster's System of Notation is taught and the intelligent use of the dictionary as a guide to exact pronunciation is made possible. Classes of words commonly mispronounced are made the subject of special drill. Pronunciation is to be accurate without affected preciseness. Breathing exercises are practiced to increase capacity and develop mobility of chest, and that students may gain control of the current of air during expulsion. The voice is cultivated; its good qualities strengthened, its bad suppressed. Proper attitudes are insisted on, and proper management of person and countenance is required. Good habits must be formed; rules alone are of no value; no one reads well by rule, though all good readers read according to rule. The elements of expression are separately considered and their application in the communication of thought is exemplified and practiced. Reading in a very high degree, is an imitative art; hence it is our earnest desire that those who are to go out from the Normal to teach the youth of the State the art of reading and speaking well, should themselves be good readers. In all classes attention is given to methods of instruction, and the various methods—word, sentence, sound and alphabet—are exemplified and discussed; but especially in the higher grades does methodology receive attention. It is hoped that a portion of the work now being done in my department will be done in the public schools. The progress of pupils under my care, while not all I could wish, has been on the whole satisfactory.

III.

VOCAL MUSIC.

The work in this department has been more successful and satisfactory than for any previous year. All students who fail to pass a thorough examination are required to present themselves for enrollment.

The number now enrolled is about eighty per cent of the whole number of students in the University, and is divided into six sections, and

each section again, into two divisions. Each division devotes one hour per week to the study. The pupils are not required to purchase books but probably as many as three fourths of them do so.

The normal section has been under my immediate instruction while the other sections have been taught by pupil teachers as follows: Sec. two by J. D. R. Watson assisted a portion of the time by W. E. Mann. Sec. three by J. A. Lowe assisted by Misses Mary Stone and Delia Caldwell.

Music is taught regularly and systematically, and is not made a means of pleasure and relaxation only, valuable as it is for such purposes, but also of discipline and culture. It has been thought best, under the conditions which now prevail, not to attempt to lead the pupil over too much ground, but to rather aim at teaching thoroughly the rudiments of the science. Our work and that of the Conservatory of Music is, and should be, different. Some of the points which receive attention are the following: Altitude, management of breath and production of tone, measurement of time, distinctness of enunciation, and musical expression; and our students are made to know the score.

The coming teacher will sing. His pupil will have around him the refining and elevating influences of this humanizing art, enriching his voice, perfecting his articulation, educating his eye, improving his ear, and developing and purifying his taste and imagination; while the teacher will have its potent aid in making the school room a place for the exercise of all noble faculties, whose stillness is broken only by pleasant voices, and where discord never comes. He, then, who is fitting himself to teach must learn to sing, and how to teach singing. Then will his pupils be taught. And if the little pilgrims who come under his tuition are sent forth into the great world with voices like a peal of joy-bells, with melody in their hearts, with songs on their lips, how much of its grief will they charm away, and how much less rugged will the way seem to their feet!

I respectfully recommend that all students of the normal department be imperatively required to study this branch while for the pupils of the preparatory sections it be made optional. My reason for this is that the classes are now very large and unwieldly, and no instruments are available but for one section.

IV.

PHYSICAL CULTURE.

I am happy to be able to state that the beneficial effect of the Calisthenic exercises upon health and carriage is so apparent as to have been clearly perceived by the pupils, who with but one or two exceptions have participated in and enjoyed these exercises. It is worthy of remark that here as in Germany the only objections to them come from the mothers of young ladies, who must be imperfectly acquainted with the kind and amount of exercise required. The time allotted to this is but eight minutes and the exercise is followed by a fifteen minutes recess.

Physicians charge, and we believe justly, that no class of men are more ignorant of the laws of health (if they are judged by the shattered physical constitutions too often of the young men and women sent from their schoolrooms into the world) than teachers.

It is a terrible charge and the most terrible part of it is its truth.

Mind and body though mysteriously are intimately related and mutually dependant; and that system of education which provides for the culture of the one to the exclusion or neglect of the other is wrong.

Hand in hand with the development of the mind must go the development of the body. A student with a strong brain and weak and sickly body is, to borrow the words of a learned scientist, like Hercules out upon the ocean in a leaky and rotten boat.

In these exercises we have not so much endeavored to secure to the student great strength of body and limb, as to preserve and promote health, increase capacity of chest, develop symmetry of form and ease and dignity of bearing.

Our efforts have been attended with a good degree of success.

The substitution of the piano for the organ has added spirit and interest to the exercises.

The large rooms in the basement were intended for gymnasiums and it is recommended that they be fitted up as such. The cost would be slight and the results good.

Very respectfully submitted,

JA'S H BROWNLEE.

Department of Physiology, History and Geography.

To ROBERT ALLYN, Principal, S. I. N. U.

SIR :

During the year nineteen classes have been taught in this department distributed as follows: nine in Geography; one in Physical Geography; one in Ancient History; one in Modern History; three in the History of the United States; three in Physiology, and one in Meteorology. These branches have been pursued by 477 students, distributed as follows: Geography 184; Physical Geography 24; Ancient History 17; Modern History 13; History of the United States 123; Physiology 92 ; Meteorology 24. Only 266 students out of the 477 obtained grades sufficiently high to entitle them to pass in their work, but 145 additional students, who were called home would without doubt have passed had they remained to complete their studies.

Of the classes mentioned above, two in Geography have been taught by Mr. W. F. Hughes and one in the History of the United States by Mr. Thomas Brown. To both of these young men, I am greatly indebted for earnest and faithful work performed in conducting the daily recita-

tions of their respective classes. By the request of Prof. Daniel B. Parkinson, one large class of Physiology was assigned to him early in the spring term. This was done, to relieve this department of some of the greatly increased work, which during this term, falls to it, in consequence of the large number of special classes formed for teachers.

In addition to my regular work, I have throughout the school year, spent one hour daily in charge of the students in the Normal Assembly Hall, and have shared with Prof. D. B. Parkinson, the supervision of the spelling classes.

The work of attending to the meteorological observations, three times daily which belongs to the teacher of this department has been temporarily assigned to Mr. John Sims, whose faithful and earnest attention to the many little details entitles him to much credit. This work requires the observer to be prompt, instant in season and out of season, to be at the instruments at the very moment of observation, a single minutes delay, vitiating more or less the results, and besides this, the work of making the various corrections in all the observed instrument readings requires much skill and accuracy and it is due Mr. Sims to say that he has not been absent from his post a single observation, nor has made any serious blunder in his calculations, since he has taken hold of the work, notwithstanding the fact that he has not received any pay for his services, either from the state or from the United States.

More attention than ever has this year been paid to the work of preparing pupil-teachers of the "Teachers" classes in History and Geography for their future duties. It has been an especial aim to make, if possible every recitation tend in this direction. From time to time various methods of class drill have been introduced and their merits and defects fully discussed. Pupil teachers, after considerable training, have been from time to time called on to conduct classes, taking for the time being, the entire charge of the class, even to the recording of grades. This drill, together with subsequent suggestions, has been of considerable utility, not only to the one conducting, but also to those composing the class. It is of course to be understood that this particular drill in this department is additional to the regular, systematic study of "The Science and Art of Teaching" pursued elsewhere in the university, under the charge of teachers, devoting the chief part of their time to this. work.

Of the classes in Physiology and Anatomy very little need be said They have this year been unusually large and more than ordinarily interesting. By dissections of small animals, the use of the microscope and a few anatomical models, and plates, much enthusiasm has been created. Much credit is due Mr. George Kennedy of this year's graduating class, for preparing a considerable number of specimens of various secretions and tissues of the human body, suitable for the microscope, which have been used with good results in teaching Histology.

Respectfully submitted,

GRANVILLE F. FOSTER.

University Library.

In the library of the University there are 2400 magazines, school and college catalogues, reports, ect., many of these being full volumes and 2800 bound volumes making a total of 5200.

Since the last year's report, the library has been much improved. Considerable expense has been laid out on shelves and ample room is now afforded for several thousand volumes. During the year the librarian, following out the suggestions of the Principal, has made a complete card catalogue of all the books. In this work, the whole two week's holiday at christmas and for three months thereafter, three hours per diem were spent in this work. The Librarian is under very great obligations to several members of the Faculty for great assistance in cataloguing and arranging books. Since February 1st, Mr. Charles Hull, a student of the university has acted as Assistant Librarian and in this capacity has performed satisfactory and valuable work.

The plan of cataloguing is as follows: Cards are taken and divided in the following classes: 1st, Title Cards. 2d, Author Cards. 3rd, Subject or Index Cards. The first are used for the title-pages of the books, the second for the name and title of the author and the third for the subjects as presented in the table of contents.

These cards are placed in three different bureaus, containing drawers, alphabetically arranged—one bureau being devoted to the Author Cards, one to the Title Cards and one to the Subject or Index Cards. By this arrangement, any one visiting the library is enabled to find any book in the library if the title, author or even any subject whatever treated in the book be known.

Before the close of 1877, a thousand volumes were added to the library, the expense being paid out of the appropriation, set apart for the purpose by the last legislature and at the beginning of the present year, sets of all the school and college Text books used in the United States were donated to the library, each book-publishing house furnishing an entire set of its text-books. This liberal donation together with many books from private sources has furnished the library with many such volumes as teachers constantly need.

Respectfully submitted,

GRANVILLE F. FOSTER.

Department of Arithmetic and Astronomy.

Annual summary of classes and work in this Department for 1877-8.

Total number of classes 18.
Aggregate number of pupils in classes 446.

FIRST TERM ARITHMETIC

D. Class,	12	pupils ;	passed	7
C. Class	27	"	"	14
B Section 1	30	"	"	23
B " 2	26	"	"	19
B " 3	29	"	"	18
Totals	124			74

SECOND TERM ARITHMETIC.

D. Class	13	pupils ;	passed	9
C. Class	36	"	"	21
B Sec. 1	37	"	"	20
B " 2	40	"	"	28
B " 3	29	"	"	15
Methods	16	"	"	7
Astronomy	19	"	"	17
Total	190			112

THIRD TERM ARITHMETIC.

D. Class	12	pupils ;	passed	8
C. Class	20	"	"	12
B Class	24	"	"	17
E. Class	22	"	"	3
A. Class	22	"	"	13
Special Class	32	"	"	14
Totals	132			67

Over seventy-five per cent of those who failed to pass, left school before the final examination; the second term on account of the very early spring, and the third term on account of the early harvest.

During the second term one class in arithmetic was kindly taught by Prof. Parkinson, and a class in primary arithmetic by Mr. Charles E. Evans, a member of the graduating class ; and the third term the same class was taught by Miss Mary C. McAnally, also a member of the graduating class.

The aim sought to be obtained in arithmetic has been rapid and accurate work, a clear understanding of principles, and an ability to explain in appropriate language the reasons and processes of the rules.

The students of this department like those of other years, come to it, with minds undisciplined, the statements of the text book are taken for granted, without thought or reflection, and the most difficult part of our

work is to awake the dormant energies of these minds, and secure independent thinking. It is in the elementary branches that the hard work of mental training has to be done. It is discipline here that makes thorough students by laying a permanent basis upon which to build. It is here the mind must be fitted for vigorous manly action, and it is here it must be trained, to marshal its faculties, powers and energies, and have skill and precision in the use of them. A student with a mind thus trained, can go successfully to the higher branches of learning, or with the addition of a few months professional training, go forth and do good service in the schools of the state.

Astronomy was taught by lectures and text book. The constellations and important stars, by observation of the heavens. A telescope, which has been added to the apparatus of the department, assisted very much in giving interest and profit to the night sessions. The moons of Jupiter were as plainly seen as are the stars in the night time; nebulae were resolved into stars, and the Transit of Mercury, on the sixth of May, was distinctly visible. There has also been added to the department a Heliotellus, by means of which more than sixty astronomical phenomina may be illustrated. A Tellurium invented by Professor Joseph Troll of Belleville has been bought and used to profit.

During the second and third terms of the year, I have had charge of the Normal Hall at the spelling hour, and attended to the pronunciation of the words, in which I have been assisted by several of the pupils. The aim has been to spell one thousand words a term; nine hundred and ninety of these must be spelled correctly to pass the student in the term's work. This arrangement enables us to spell three thousand words during the year, very nearly the number used by any one of most of the public speakers and writers.

The correcting and recording of the grades of the students spelling has been attended to by Prof's Parkinson and Foster assisted by students. It has been the endeavor as far as practicable, to have the students do the work; better to fit them for schoolroom duties, hereafter.

A portion of the time during the second and third terms, I have had charge of the Normal Hall; as, also the fifth hour of each school session throughout the year.

The above summary has been the work of the year.

Respectfully submitted,

A. C. HILLMAN.

Report of Grammar and Book-Keeping.

Annual summary of classes and work in this department for 1877-8.

FIRST TERM.

Grammar B.	55	pupils.	7	called	home.	30	passed	examination.
" C.	44	"	5	"	"	30	"	"
" Prim'y.	16	"	0	"	"	16	"	"
Book-Keeping.	14	"	0	"	"	13	"	"
Total	129		12			89		

SECOND TERM.

Grammar A	43	pupils,	12	called	home,	26	pased	examinations.
" B	46	"	13	"	"	32	"	"
" C	54	"	20	"	"	32	"	"
" Prim'y	18	"	00	"	"	18	"	"
Book-Keeping	20	"	2	"	"	16	"	"
Total	181		47			124		

THIRD TERM.

Analysis.	30	pupils,	4	called	home,	21	will	pass	examinations.
Grammar A	44	"	14	"	"	29	"	"	"
" B	33	"	17	"	"	15	"	"	"
" C	36	"	14	"	"	21	"	"	"
Total	143		49			86			

During the year the aggregate number of 453 students have been in my classes; 108 of them have been called home before the close of the term's work; 299 have passed to higher grades.

Teaching them to use their knowledge of grammar, has not been so difficult as in previous years. Considerable work has been done in writing essays, and with great profit to the students. It teaches them not only to think on a given subject, but also to express those thoughts readily and correctly. Each year's experience gives additional force to the opinion that it would be wise for the students to make a better preparation before entering the Normal. At the public schools a good understanding of the principles of grammar should be obtained, that their time here might be devoted to the study of the best methods of teaching the science to others.

Book-keeping is a branch in which an interest is easily awakened, as its use is so apparent. My classes have done good work in this department, and, I hope, are well fitted to instruct those who shall be committed to their care in the schools of the state.

Respectfully submitted,

M. Buck.

Writing and Drawing.

DEPARTMENT OF WRITING.

ROBERT ALLYN, Principal S. I. N. U.

SIR :—I herewith submit to you my report of the departments of Writing and Drawing.

The students in writing, during the entire year, have been placed in three divisions, as follows : Class A. or Normal division, Class B. and Class C.

These three classes assembled every Friday at the general exercise hour in Normal Hall for instruction—lessons being assigned them for completion during the week.

In conducting the writing exercises I have been greatly assisted by pupil teachers.

During the three terms of the year just completed, Mr. J. T. McAnally has been my assistant and has aided me in the most satisfactory manner in conducting Class A, or the Normal division.

No. enrolled	1st term	70 ;	No. writing		35 ;	excused	35
" "	2d term	86 ;	"	"	46 ;	"	40
" "	3d term	101 ;	"	"	32 ;	"	69
Totals		257			113		144

Mr. John G. Sims throughout the entire year has proven a faithful and highly efficient assistant in Class B. In this class there were enrolled :

1st term	82	No. excused	2
2d term	86	"	2
3d term	55	"	23
Totals	223		27

In class C, Miss Julia Campbell acted as assistant teacher during the 1st term and proved herself competent in the highest degree. Pending the 2nd term Miss Ida M'Creery officiated in Miss Campbell's place, and the position during the 3rd was filled by Miss Mary McAnally

Both were highly successful and efficient in the discharge of their duty.

In this class the number enrolled was :

1st term	47	No. excused	0
2nd term	67	"	0
3rd term	57	"	0
Totals	171		0

The students with few exceptions have been prompt, neat, and careful in executing the lessons assigned them, and the general improvement in writing has been perceptibly manifest.

DEPARTMENT OF DRAWING

Number of	pupils	enrolled	1st term	75,	No. of	classes	4
"	"	"	2nd "	90	"	"	5
"	"	"	3rd "	85	"	"	5
Totals				250			14

Realizing the great need of a system of drawing adapted especially to the requirements of Normal work, comprehending thoroughly the fundamental laws of the art, and embracing practice sufficient to render our students competent as teachers to give instructions therein, we have compiled from the best authorities a system which enables us to bring the completion of the course within the limits of the school year.

The course embraces a thorough drill in the laws of Perspective illustrated by crayon charts, such as every teacher can easily make himself, free-hand-work on blackboards, principles involved in industrial drawing, also landscape, botanical and miscellaneous work.

It has been our endeavor in thus giving a liberal course, to instruct our students so as to give them power for self culture, and render them competent when they go hence as teachers, to develop the special talent of their pupils in any or all of the various branches of the art.

Our work this year has been largely facilitated by the acquisition of a great variety of beautiful studies from the flat, also a number of fine models in plaster.

We have seriously felt the need of drawing tables suitable for the use of those, who desired to make instrumental drawing a specialty, and we trust the time is not far distant when such necessary facilities will be supplied.

During the year seventy-five have completed the course, the remainder have had one or two terms instruction.

The work this year has in several respects not reached the standard at which we aimed, yet we feel that it has been a great improvement upon that of the previous year, and we trust that in the future, should we here remain, our highest aims for the development of the abundant talent of the students of Southern Illinois, in this beautiful and highly useful branch of culture, will be fully realized.

Respectfully submitted,

HELEN M. NASH.

FIFTH

ANNUAL REPORT

—OF THE—

PRINCIPAL

—OF THE—

Southern Illinois Normal University,

WITH THE

Accompanying Reports of the Several Professors.

OBSERVER PRINT,
CARBONDALE, ILL.
1879.

To the Board of Trustees
of the Southern Illinois Normal University,
Carbondale, Illinois.

Gentlemen:—The fifth year of our school life in this Normal University has come to its close and we have to render thanks to a kind Providence for health in large measure and for other numerous and exalted mercies. No death has occurred among our faculty or students And only mild forms of disease has at any time afflicted our school. During the winter measles caused some interruption in study. In most respects the year has been our most successful one. Our numbers have been larger each term and the average length of time each student has remained has been longer. The grade of work done has been higher but the numbers in the advanced classes has not increased. This fact is readily accounted for by two things, owing to the stringency of the times many of our students have found themselves obliged to teach school in order to provide means with which to prosecute their studies; and a change in our course of study, or more properly in our mode of classing our students by the studies they have not completed. This caused many to pause to make the lower studies and has been a most excellent thing for our students. Then our Spring Term, owing to the change of times published in our last catalogue opened so early and continued for so short a period that many did not deem it profitable to be present. But in good character among the students and in diligent attention to business we have seldom seen young people labor more successfully or with more enthusiasm.

The number of students has been	429
Last year there were	408
An increase of	21
The aggregate by term is	867
Last year it was	776
An increase of	91
The average of attendance is	26 weeks.
The average of attendance last year	24½ weeks.

There have entered new students 210. In the fall 122, winter 33, spring 55.

It has been a matter of much interest to us to note the occupations of

the parents of the pupils. There have been 1,208 enrolled since the beginning of the university. And the record of occupations is as follows, viz: Farmers 649, carpenters 34, laborers 14, mechanics 11, shoemakers 7, miners 4, fruit growers 5, hotel keepers 7, blacksmiths 4, livery stable keepers 3, tinsmiths 3, upholsterer 1, cabinet makers 3, mason 1, house painters 3, harness makers 2, machinist 1, saloon keeper 1, butcher 1, ship carpenter 1, photographer 1, tobacconist 1, jewelers 4, lawyers 26, merchants 151, ministers 45, teachers 26, millers 21, traders 19, agents 20, druggists 10, army officer 1, civil officers 10, telegraphers 5, editors 5, engineers 4, book keepers 2, contractors 2, manufacturers 2, clerks 2, grocers 3, bankers 5. By this record it will be seen that the children of the working classes as they are called, accept, by far more than those of professional men, the privileges of the University.

There have died, as nearly as we can ascertain nine young men and ten young women who have been our students.

There have also been married twenty-five men and forty women, ten of whom have constituted five couples of students. Eighteen were married before entering.

We have with considerable pains kept a record of those who have taught in the schools of our State and find the number to be 622. Last year we reported 511, making an increase of 111. Many of these have already taught more than one year and a larger proportion than heretofore will continue in this work. An estimate of the number of months taught by our students justifies the statement that the number of months of teaching which they have done in schools is double that of their attendance in this university.

If we look at these figures we shall see that many more do actually teach than the number of those who pledge themselves to do it. The total number enrolled, as above stated, is 1,208. There are in school at the present time 289, of whom 78 have been counted in the above 622 who have been teachers. Putting these figures properly together, taking the 78 from the 622 and adding the number now in attendance we shall make 833 who are now studying in the University or have taught and this will leave 375 who are supposed to have paid tuition. But on examination we find 507 have actually paid. This ought so far as our history of five years is concerned to refute and effectually the common statement of opponents to Normal schools, that their students do not teach. And another assertion is often made that these Normalites do not teach the country schools. But if they are employed in higher schools at larger wages it should in truth prove that their work is acceptable to the people and in demand among those who would elevate the scholarship of their children.

A remark made in a former report will bear to be repeated in substance here. While not all these students of ours have been excellent or very successful teachers, it is doubtful if there is a single one who

has not taught a better school than the same person would have taught without our instructions. A few may have grown more conceited and opiniative in consequence of having studied at a Normal, and hence may have failed to do as good work as they would have done with greater distrust of their own abilities, or more caution or a more correct estimate of the popular demand. Yet trustworthy information derived from various sources, independent of these teachers own reports, confirm the opinion heretofore expressed that the efficiency of a large number of the teachers we have instructed has been fully doubled. And we certainly have found that the young persons who now enter our school after having been trained by our students are far in advance of those who entered five years ago.

The several Professors have been laboriously and very successfully employed in their several departments, as will be seen by their reports herewith submitted. The larger numbers each term have demonstrated the need of an assistant in the common studies and in the elementary Latin, and Miss Essie C. Finley was employed early in the year to teach several of these classes. It is believed that the Faculty have all been diligent and pains-taking, and conscientious in all their duties, and it certainly has been very gratifying to them to notice so good an increase in numbers and in attention to study and business among the students. The general health of the members of the families of the Faculty has been good with some exceptions, not however to impair their efficiency unless in case of the protracted sickness in that of the Principal which may have been in some instances in the way of the promptest discharge of duty.

The changes introduced into the last catalogue affecting our course of study as to the matter and methods of examinations have appeared to me to work well. These have I think diminished the number of our graduates this year, but they will it is confidently believed in a much larger degree increase the class of the next and of all subsequent classes. At all events it has aided us to systematize our class work in a very large measure, and has given to our students a better comprehension of what is a methodical study and the proper order of the several branches of education.

Professor Thomas, whose national reputation obtained for him the appointment of State Entomologist of Illinois and a place on the United States' Commission to investigate the habits of the Rocky Mountain locust, has been employed in these duties and has rececived no salary. He has however taught one class in zoology and has given valuable advice and assistance in many ways. The rest of the duties of this department including the care of the museum has been devolved upon Professor George H. French, who in July last was employed as a collector and in September was chosen curator and assistant teacher in various classes, and he has since been a valuable member of the Faculty.

The department of Professor Jerome has been conducted in the same

prompt and vigorous manner as has characterized him as an officer from the beginning. He has also continued to discharge the onerous and perplexing duties of Registrar, collecting bills and making orders keeping the books and filing the vouchers for such a multiplicity of details as might weary and confuse a less resolute and clear-headed man. Owing to some causes the numbers in this department have slightly decreased, we believe however only temporarily.

Professor Hull in the department of Higher Mathematics has been in the same degree as heretofore successful in impressing upon the students his own careful and quiet but earnest methods of honest work and has seen a liberal increase of members and enthusiasm, especially in the classes in trigonometry and surveying. The same increase has been seen also in the departments of Physics and chemistry where Professor Parkinson has succeeded in imparting a spirit of original research into the minds of many of his pupils which deserves great praise. He has also faithfully attended to the record of absences at morning and evening roll calls and has labored vigorously in the work of the spelling in connection with Professor Hillman.

Professor Brownlee with his quiet dignity and kindly bearing has given to the department of Reading and English literature a commanding position. His work is worthy of honorable mention and encouragement and his persevering efforts to make the light gymnastics and the music delightful and profitable are deserving of better praise than I can here bestow.

In the departments of Physical Geography, History and Physiology Professor Foster has continued to awaken enthusiasm and to inspire thoroughness. He is full of zeal and accomplishes with many of the students real wonders. In addition he has had charge of the library and has in a most careful and useful manner made a record and catalogue of more than a thousand volumes added during the year.

Professor Hillman has had charge of the departments of Arithmetic and Astronomy and has been assisted in several classes by pupil teachers. It is one of the most difficult positions and also one of the most important. And so great are the deficiencies of many who enter and so irregularly do they labor and so little do they accomplish that almost any other man would lose heart. He has however labored patiently and been an inspiring presence in the work.

Miss Buck has been during the year engaged in teaching book keeping for which under her popular instructions there has been a great demand. She has continued to teach the grammar and English analysis and has done most excellent work, and is gradually preparing our students to understand the genius of our language.

In the department of Drawing under Mrs. Nash the year has witnessed a commendable improvement. She has worked with spirit and energy and has succeeded in inspiring many to strive for excellence in Free Hand and Pencil Drawing. This is an art so necessary for a teach-

er that we realize that no expense should be spared to make it popular and successful.

The Janitor has very faithfully performed the arduous and varied duties of his labor and specially deserves the gratitude of all.

During the year many needed improvements have been made in the Library and Museum and in the Normal Hall and in the Rooms of Natural Philosophy and of Higher Mathematics. The platform in the Hall has been enlarged and newly carpeted, two fine tables have been made for the reference books and by the students many excellent plaster busts and engraved portraits have been put in place. And besides an opportunity offered to purchase a grand portrait of President Lincoln. In the Library three new tables for use in writing and for the catalogues of the books and for the magazines have been made and put in place. A good supply of apparatus has been purchased and very fine additions have been made to the Museum. The creditable appropriations made by the General Assembly of 1877 have enabled us to begin the foundations of a library and museum which if the same generous spirit shall prevail will soon give to this portion of the State advantages of books, specimens and collections long needed and always valuable.

In accordance with the directions of the trustees at their meeting in June last the Faculty established a course of lectures on Sunday afternoons which appears to me to have been beneficial in many ways. The Principal has delivered fifteen lectures in the course. Professor Thomas one; Professor Brownlee three; Professor Foster four; Professor Hillman three and Professor French two. They recommend that the course be continued and suggest that they be given once a month instead of each week.

It is suggested that it would be better if the trustees would make an order that no student should in any case be admitted without either an appointment or a recommendation by the county superintendent. The custom now prevails for the Principal in a few cases to appoint when suitable recommendations are before him, or for a trustee to do the same. And in cases like these personal persuasion often becomes vexations. To go back to the one idea of county superintendents responsibility for the age and avowed intentions of the student to teach will bring to bear on the pupil the public opinion of home, and give a wider interest to the work of the school. We find now that nearly every county in Southern Illinois is represented in our school –the number is indeed twenty-nine—and many more counties have sent students to be instructed.

The Faculty unanimously recommend the following persons as candidates to receive diplomas in the scientific course, they having completed the several branches of study embraced in it under the charge of our Professors or having been examined by us as to their fitness. All

are of good moral character are in our opinion entitled to the honor:

ANDREW C. BURNETT.
GEORGE H. C. FARMER.
IDA M. MCCREERY.
LYMAN T. PHILLIPS.

It is recommended that the edition of the catalogue be 3,500 instead of 3,000 as heretofore, and the trustees insist on better workmanship in the future. The trustees should themselves order the work and make some one of the Faculty an agent or committee to supervise the work.

The Military Department has of course been an experiment and has had the very efficient services of Capt. Thomas J. Spencer, U. S. A. It has probably succeeded as well as any new experiment which was not under a very forcible rule of compulsion. It has been entirely voluntary and of course has been subject to great variations. It has not really been a success. It has been more costly than was anticipated and Capt. Spencer has incurred expenses on his own individual responsibility. The faculty are as they were last year not willing to make recommendation in regard to this department. The Principal is clear in recommending its continuance for another year and suggests that more definite rules be enacted for its government. I wish to say that Captain Spencer has labored with great zeal and energy and deserves a high commendation.

The Principal in addition to the general charge of the oversight of the school has taught the following classes, viz:

In the Fall Term—Mental Philosophy.
Theoretical Pedagogics.
In the Winter Term—Ethics.
Criticism.
In the Spring Term – Constitution of the United States.
Theoretical Pedagogics.
School Laws of Illinois.

These classes all belong to the most important portion of our course in the methodology of the science of teaching. It is the object in the mental philosophy to explain and illustrate the powers or faculties of the human mind and its methods of gathering and retaining knowledge. In the regular course this is supplemented by the methods of expression in the science of rhetoric which has been taught by Professor Parkinson. Logic also by him belongs in the same branch and is used to teach how valid reasoning proceeds in drawing conclusions. Then criticism or the rules by which literature and art are judged are brought in to the same plan, while theoretical pedagogics teaches how each science is to be learned in the first place, and in the second how it is to be presented to the mind of a child both for the purpose of being comprehended and remembered. The Constitution of the United States in its provisions and history together with that of Illinois is thoroughly explained for the purpose both of making the teacher familiar with our

nation's glorious contributions to the science of political and governmental thought, and of making the citizen intelligent concerning his duties to the country which nourishes him and which he should serve with the loyalty of a true heart. Then the school law of our own state is a matter with which every citizen, to say nothing of every teacher should know as he knows the road to the postoffice.

The department is a most interesting one and has far reaching connections with all our school business and deserves the whole attention of a master mind. In the multiciplicity of details necessarily devolved on the Principal of a school already large and growing in a healthy manner that time and thought cannot be given to it which its importance demands. But much has been done and with the aid of Professor Parkinson in the two branches of rhetoric and logic and of Professor Hull, whose practical experience formerly as a county superintendent renders him invaluable in the kindred branch of practical pedagogics and school law, this part of our course is certainly among the most practical and useful of all our work. We have devoted to it a much larger share of thought and time and purpose to give to its duties a still larger portion of our strength and study.

Respectfully submitted,

ROBERT ALLYN, PRINCIPAL.

II. Department of Natural Science.

CARBONDALE, Ill., May 23, 1879.

ROBT. ALLYN, LL. D., *Principal of Southern Illinois Normal University.*

DEAR SIR:—I herewith submit the following report of the few classes that have been under my charge during the school year now near its close:

In the special session, held during the month of August last, I had three classes: Botany, zoology and physiology, carrying the three through the session. The character of the work was review of the subjects without using any particular text books, together with methods of teaching them to different grades of classes. Besides this considerable practical work was done in the botany and zoology classes; but not as much as can be done now in the same time because of the better preparations that have been made since for doing work in natural history.

During the fall term I taught a class in elementary zoology until the first monthly examination, after which it was taken by Prof. Thomas; and a class in elementary botany. The latter contained members of whom passed. The text book used was Wood's Class Book, selecting such portions as were adapted to the wants of the class.

During the winter term I taught a class in elementary physiology and a division of a class in geography. The first began with the term, and

used Dalton's Physiology as a text book. The second began with me after a few weeks of the term had passed, having been taught by a pupil teacher. The number, etc., in the classes was as follows:

Elementary Physiology, - -	Number, 12	Left Class, 5	Passed 6
Geography - - - - - -	" 12	" 3	" 9

This term I have classes in elementary botany, advanced botany and zoology, the numbers as follows:

Elementary Botany - - -	Number, 25	Left Class, 5	Passed, 17
Advanced Botany - - -	" 28	" 3	" 19
Zoology - - - - - -	" 26	" 2	" 18

Gray's "How Plants Grow" was introduced as a text book in the elementary class and gives better results than the large book would with the same grade of pupils. Some analytical work has been done by this class and a few of its members have pressed and mounted some plants for themselves. The work in the advanced class has been study of the text and analytical work, the latter beginning as soon as flowers were to be had in sufficient quantity. Besides this work outside of the recitation hour has been encouraged, such as analyzing and pressing plants, which was taken hold of with considerable interest by the class, the first by most of its members but the last by a smaller number. To facilitate preparing plants for the herbarium three presses were prepared the fore part of the term, two of which have been in constant use.

It was found that the zoology class, though of the same grade, parts of it would have to be heard at separate hours on account of clashing with other studies. Besides the text book work, analytical work has been done during the recitation hour about half of the time during the term. It is to be regretted that in this study facilities for such work cannot be furnished in the text book the same as in botany. This lack was partially met by using Jordan's Manual for the vertebrates supplemented by Birds of North America and Tenny's Manual. In insects numbers five, six and seven of the State Entomologist's reports were used together with some table work prepared for the occasion and put upon the blackboard. To meet the want of tables in zoology I have thought it best to prepare from time to time as we obtained material tables on the different groups of animals, of our own state at least. The first of these, a table for the Diurnal Lepidoptera of Illinois, I shall endeavor to have ready to submit to you as part of my report for the museum in a few days. A dozen or more copies of Jordan's Manual owned by the school would furnish very good facilities for analysis in the vertebrates and the practicability of the purchase of such a quantity is suggested.

Besides work in the recitation practical work in zoology has been encouraged in those who could spare the time during the after lunch hours. As a result more than half the class have been engaged in this work, some only occasionally, others nearly regularly. This work con

sisted in analysis, and preparing and taking care of specimens in various classes of animals.

All of which is respectfully submitted,

G. H. FRENCH, Curator of Museum.

III. Department of Languages and Literatures.

ROBT. ALLYN, LL. D., *Principal Southern Illinois Normal University.*

DEAR SIR:—The following is a summary of the classes and work in this department for 1878-79:

In the fall term the classes under my charge were as follows: Greek Rudiments—three members; Cæsar's Commentaries on the Gallic War, and Latin Grammar—eighteen members; The Æneid of Virgil—five members; Xenophon's Anabasis—five members; two classes in Latin Elements—one having twenty, and the other twenty-two members.

In the winter term the classes continued the same studies or advanced to higher authors. The Anabasis class advanced to the Memorabilia of Socrates, and the class in Cæsar's Commentaries advanced to Sallust's Cataline, the students in Virgil read the Orations of Cicero; the classes beginning the Latin advanced to reading in Roman history, and Latin Grammar; and the Greek Rudiments passed to exercises in reading, fables anecdotes, mythology, legends, etc.

During the third term, and at this writing, my classes are pursuing the studies of Anabasis and Greek Grammar, Tacitus de Germania, Homer's Iliad, Sallust's Cataline and Latin Grammar, Roman History and Latin Grammar.

During a part of the first term and during all the second term one of the classes in the elements of Latin was instructed by Miss Essie C. Finley.

The second and third terms, I have also had charge of one division of section D, in orthography. During the last term I have spent one hour each day as monitor in Normal Hall.

It will be seen from the above that there have been eighteen classes in this department, comprising a membership in the aggregate, aside from the class in orthography, of two hundred and nineteen members. It affords me pleasure to state that the students have very generally evinced a commendable zeal and an earnest desire to progress in their studies. A few from irregular attendance and want of faithful application, will probably fail to carry their work. The grades, in most cases, from daily recitations and written examinations, have been excellent. Some have been called home, and have thus interfered with the amount and progress of their class work.

The classical course embraces three years of Latin and two years of the

Greek. It is the aim to make the student more familiar with the English by a knowledge of the historic and philosophic etymology of the Latin and Greek elements. The method of presenting the lessons at each recitation looks to the practical. Each lesson is thoroughly examined as to etymology, and grammatical structure. The aim is to cultivate accuracy in memory and judgment at the same time, to reveal the intimate connection of the ancient with our own language, and especially to render the student's knowledge of the English more thorough and satisfactory.

Added to the duties of the school and class room I have performed the labor of the Registrar of the institution; have enrolled carefully eight hundred and sixty-five names, giving date of entrance, residence, parent's or guardian's name, date of birth, nativity, etc.; have collected all the tuition and incidental fees, and have, on receipt, transferred the same to the treasurer of the institution; have prepared proper vouchers in duplicate, and have issued money orders for the payment of all bills of indebtedness, and have kept a faithful account of all amounts received and paid out; and have performed such other duties as pertain to the office of Registrar.

Respectfully submitted.

CHARLES W. JEROME.

IV. Higher Mathematics and Practical Pedagogics.

ROBT. ALLYN, LL. D., *Principal Southern Illinois Normal University.*

DEAR SIR:—The following is a summary of the work in my department for the year 1878-79:

	(1)	(2)	(3)
FALL TERM.			
Elementary Algebra, E, two classes	44	37	23
Higher Algebra, C, one class	30	29	20
Geometry, B, two classes	25	22	18
Practical Pedagogics, B, one class	16	14	14
WINTER TERM.			
Elementary Algebra, E, one class	25	19	13
Elementary Algebra, D, one class	34	26	14
Higher Algebra, B, one class	29	26	17
Geometry A, two classes	20	20	16
Practical Pedagogics, A, one class	19	18	18
SPRING TERM.			
Elementary Algebra, E, one class	7	6	4
Elementary Algebra, D, one class	24	20	9
Higher Algebra, A, one class	19	17	14
Trigonometry, one class	20	20	19
Aggregate	312	274	199

Each of the classes in the foregoing statement continued for one term. Column (1) shows the number enrolled; column (2), the number at the close of the term; column (3), the number successful in their work.

The trigonometry required two hours each day and should be reckoned as two classes. Prof. Parkinson taught one of the classes in the elementary algebra during the fall term. Besides the teaching work here indicated, one hour each day for about half the year, has been given to the supervision of pupils in the assemply room of the school.

The Board of Trustees assigned to me, at their meeting in September, 1878, the work of making estimates for the grading of about nine acres of the school lot. Having only inexperienced assistants, the results were necessarily slowly obtained and required constant revision. A separate and full report on the grading will be made to the Board of Trustees.

A careful estimate of the time indicated in the foregoing statements, shows that I have been occupied more hours a day during the entire year than have been assigned to the instruction of classes.

The change in the course of study, at the beginning of the year prevented the organization of a class in the optional studies of the mathematical course,—the general geometry and calculus. The same cause prevented the organization of a class in practical surveying.

The number of classes regularly required in the department of higher mathematics, each year, including the optional branches, is fifteen, and in practical pedagogics three. If necessary to the proper care of this number, the classes in elementary algebra may, with profit, be placed under pupils who have been trained in pedagogics and higher algebra, in our institution, subject to careful daily supervision.

The progress made by a large part of the students in algebra and the higher branches of mathematics has been quite satisfactory. A majority of those in the lower classes in algebra seem to require from one to three terms for the acquirement of good habits of study. Failure in the higher classes has usually resulted from the large number of studies pursued rather than from lack of effort.

The classes in pedagogics have done well and deserve praise. Some changes are proposed for the next class. Three terms will be required instead of two, that more time may be given to observation of methods, to careful preparation of notes and criticisms, and to the practical management of classes.

The apparatus received during the year, will add much to the profit of the classes in trigonometry and surveying.

A synopsis of the work of the classes named in this report has been prepared for publication in connection with the course of study in the catalogue for the year just closed.

Respectfully submitted,

JOHN HULL.

V. Department of Physics and Chemistry.

ROBT. ALLYN, LL.D., *Principal Southern Illinois Normal University.*

DEAR SIR:—I beg leave to submit the following report from the Department of Physics and Chemistry, with some additional classes in other departments, during the school year just passed.

The following is a list of classes heard; giving the number enrolled and the number passed.

	No. pupils enrolled.	No. pupils passed.
FALL TERM.		
Advanced Natural Philosophy		
Analytical Chemistry	5	4
Rhetoric	25	20
Elementary Algebra, Sec. 2	26	11
WINTER TERM.		
Elementary Natural Philosophy	26	21
Descriptive and Theoretical Chemistry	17	17
Analytical Chemistry	4	4
Logic	17	15
SPRING TERM.		
Natural Philosophy (Special)		
Analytical Chemistry	13	13
Geology and Mineralogy	16	15
Elementary Physiology		

Am glad to report that during the past year valuable additions have been made to the physical apparatus both as to material and excellent and convenient cases for its protection.

Since the last report the seats and lecture table have been rearranged so as to make the room better adapted to the kind of work.

As another important improvement I suggest that suitable curtains be provided for the purpose of darkening the room in giving experiments in optics, electricity, etc.

On account of the liberal aid given to this department, that of chemistry has been conducted as economically as was possible—not to interfere with the usual demands.

The change made by the faculty in the course of study pertaining to this branch has worked very satisfactorily. Especially since the new arrangement of terms, does it seem necessary to supplement the ten weeks work in the inorganic chemistry by some little of the organic in connection with the analysis during the third term.

As to the facilities in the Laboratory I earnestly ask that the water supply be introduced into the laboratory proper with the sink enlarged and at least three more faucets. New cases are needed for the chemicals; and the black-board should be put in repair. The ceiling should be whitened that the room be made more cheerful.

Perhaps the thing most needed is a hood, so constructed as to carry off the unpleasant oders that necessarily accumulate in such a place.

At present other parts of the building are troubled with the gases that should be carried away.

In addition to the work done in class, I refer to the keeping of records of attendance for the entire school, and also, in connection with Prof. Hillman, supervision of the spelling; making a report of the several grades every week.

Yours most respectfully,

D. B. PARKINSON.

VI. Departments of Literature and Elocution, Vocal Music and Calisthenics.

ROBT. ALLYN, LL. D., *Principal Southern Illinois Normal University.*

DEAR SIR:—I have the honor herewith to submit my report for the year 1878-79.

The number enrolled, dropped and passed in the first department is as follows:

ENGLISH LITERATURE—*Two Terms.*

	Enrolled.	Dropped.	Passed.
Second Term	25	3	20
Third Term	24	3	21
ELOCUTION.			
First Term	35	5	29
Second Term	18	1	14
Third Term	37	7	28
READING—*Class A.*			
First Term	33	4	21
Second Term	27	11	14
Third Term	32	7	23
READING—*Class B.*			
First Term	20	6	8
Second Term	14	6	8
Third Term	25	10	13
READING—*Class C—Two Terms.*			
First Term	11	5	5
Second Term	16	3	13

Total for First Term	99
Total for Second Term	100
Total for Third Term	118

The first term in literature was devoted entirely to the poets and authors of America. The text book used was Royse's American Literature, but the extracts therein given were supplemented by additional readings from Bryant, Longfellow, Whittier, Lowell, Poe, Read, Alice and Phœbe Cary; from Cooper, Hawthorne, and Irving and Mrs. Stone, etc. I shall make the study of American Literature precede the English hereafter. In English Literature the text book used was Shaw's Re-

vised Outlines, which has given better satisfaction than former editions as the style has been simplified and improved and much unimportant matter has been omitted. Especial attention has been bestowed upon the more remarkable periods and upon the great authors, and time was found for the reading by teacher and pupils, of copious extracts from the latter, and was most profitably spent. Among the readings were The Clerk's Tale from the Canterbury Tales, Shakespeare's Julius Cæsar, Spenser's Epithalamium, Milton's Hymn on the Nativity L'Allegro and Il Pensoroso, Coleridge's Rime of the Ancient Mariner, Dryden's Alexander's Feast, and Burns' Tam O Shanter. Extracts were also read from Mandeville, Gower, Dunbar, King James I, from The Fairy Queen, the Defence of Poesy; from Bacon, Jonson, Sidney, Raleigh, Marlone, Burton; from Sterne, Goldsmith, Johnson, Wordsworth, Shelley, Southey, DeQuincy, Hunt, and many others. By this means great interest was awakened and maintained, and a love for good literature fostered and increased. I have been greatly pleased by the work done and progress made by the classes, who, with a few exceptions, have been earnest and faithful in duty.

ELOCUTION AND READING.

The report from the classes in this important branch of study is on the whole favorable and better work has been done than in any previous year.

It is a matter of regret to have to say that many of those who come under my tuition come not only with much to learn, but worse still, with much to unlearn. Bad habits have been formed which have to be eradicated. Tones, inflections, emphasis and manner, are unnatural while reading, and are in marked contrast to those used in unpremeditated conversation. Oral reading brings into exercise two sets of faculties, viz: The receptive, by means of which the author's exact meaning is apprehended; and the expressive, through the agency of which the thoughts and feelings of the author are communicated to another. The chief reason why the majority of teachers fail in teaching the important art of reading is because they permit their pupils to attempt expression of thoughts not clearly conceived by the mind. The receptive faculties must have been so trained on a selection, before the expressive are brought into exercise, that when the work of communicating thought, feeling and purpose to another mind, through the eye and ear, is begun the former may do their work unconsciously, and the whole soul be given to the latter. First, understand, then express. It does by no means follow that one who can grasp intelligently the author's meaning can adequately express that to another. The agencies of expression—voice and action—may both be inadequate to the task. The ability to comprehend thoughts and feel emotion, and ability to adequately communicate them to another are different things. But it does follow that without a clear conception of that which is to be communicated, the most cultivated voice and expressive manner are vain.

The class in elocution are highly pleased with the new text book—Cumnoch's Choice Readings. Consideration has been given to respiration in so far as it related to speech. In giving to the class a clear idea of the organs and muscles of respiration and their action, the casts of the organs of breathing, voice and speech have been found a great aid. Breathing exercises have been frequently practiced and the spirometer has been used to aid in the development of the chest. The tones of the voice have been made the subject of attention, and the five elements of a tone—quality, force, stress, pitch and quantity, have been separately considered, and their application in the communication of thought exemplified and practiced.

The good qualities of voices have been strengthened, the bad suppressed. All of the elements of delivery have received attention. The elementary sounds and the symbols representing them, with the diacritical marks, (Webster's system), syllables, words, phrases, clauses, sentences, paragraphs, etc.; the pause, inflection, accent, emphasis, slur and cadence, all have been passed in review. Proper attitudes have been taught and insisted on and concert exercises in gesture have been given. Thorough attention has been bestowed upon the professional part of our work and the methods of teaching reading in primary grades, viz: The alphabetic, phonetic, word and sentence, have been exemplified and discussed. Each member of the class was required to prepare a carefully considered essay on the word method.

READING.

There have been as shown by the tabulated statement, three classes in reading, viz; A, B and C, the latter of which, at the close of the second term, is merged into the B class. In the upper class, methods of teaching in primary and intermediate grades was discussed, and essays were presented. Concert reading has been allowed but sparingly on account of its bad effect upon the voice and manner of pupils. Pupils have been generally required to read aloud the selections assigned in their rooms before reading them in class. The articulative organs have been trained and strengthened by a progressive drill upon the elements of utterance, first taken singly then in their simple and more difficult combinations. Accent, inflection, emphasis, pitch, force, purity and rate of voice have been given attention. One system of symbolization has been analyzed and the intelligent use of the dictionary as a guide to exact pronunciation is made possible. Classes of words commonly mispronounced are made the subject of special drill.

A portion of the work now done in my department ought to be done in the common schools.

In addition to the work in elocution and reading above specified, I have given private instruction to students desiring my aid in preparing them for public appearance upon the platform at exhibitions or commencements.

VOCAL MUSIC.

The course in this branch as arranged is four terms in length and students of The Normal department—and only these are required to study it—are classed into four grades or sections. In the work of instruction I have been assisted by Messrs. G. Brown, W. E. Mann and Louis Heitman, and Misses Dora Lipe and Sarah Saul.

Better progress has been made than in any previous year. The reduction in the number enrolled caused by the adoption of the rule making the study of music obligatory only on those who pay no tuition has made it possible to secure better results than heretofore. About sixty per cent of those in A section passed successfully the required examination and will hereafter be excused. Promotions have been made in all the other grades of those who passed the final examinations at the close of this term.

PHYSICAL CULTURE.

I am happy to be able to state that the beneficial effect of the calisthenic exercises upon health and carriage is so apparent as to have been clearly perceived by the pupils, who, with but one or two exceptions, have participated in and enjoyed these exercises. It is worthy of remark that here, as in Germany, the only objections to them come from the mothers of young ladies, who must be imperfectly acquainted with the kind and amount of exercise required. The time allotted to this is but eight minutes, and the exercise is followed by a fifteen minutes' recess.

Physicians charge, and we believe justly, that no class of men are more ignorant of the laws of health (if they are judged by the shattered physical constitutions too often of the young men and women sent from their school rooms into the world) than teachers.

It is a terrible charge, and the most terrible part of it is its truth.

Mind and body, though mysteriously, are intimately related and mutually dependent; and that system of education which provides for the culture of the one to the exclusion or neglect of the other is wrong.

Hand in hand with the development of the mind must go the development of the body. A student with a strong brain and weak and sickly body is, to borrow the words of a learned scientist, like Hercules out upon the ocean in a leaky and rotten boat.

In these exercises we have not so much endeavored to secure to the student great strength of body and limb, as to preserve and promise health, increase capacity of chest, and develop symmetry of form and ease and dignity of bearing.

Our efforts have been attended with a good degree of success.

Very respectfully submitted.

JAMES H. BROWNLEE.

VII. Department of Physiology, History and Geography.

ROBT. ALLYN, LL. D., *Principal Southern Illinois Normal University.*

DEAR SIR:—During the year the following classes were taught in this department:

FALL TERM.

Ancient History	18 Pupils.
Physiology (Normal course)	12 "
Geography, Class A	12 "
" " B	27 "
" " C	20 "
" " D	13 "
" " E	23 "

WINTER TERM.

Geography, Class A	6 "
" " B	38 "
" " C	29 "
Modern History	17 "
United States History, Class A	39 "
" " " " B	32 "

SPRING TERM.

Geography, Class A	29 "
" " B	35 "
United States History, Class A	14 "
" " " " B, Division 1	43 "
" " " " B, " 2	34 "
Physiology, (Normal Course)	6 "
" (Preparatory Course)	32 "
Physical Geography	11 "
Total 21 classes and	490 Pupils.

Distributed by branches:—

Geography	232 Pupils.
United States History	162 "
Ancient History	18 "
Modern History	17 "
Physiology	50 "
Physical Geography	11 "
Total as before	490 Pupils.

Only 400 pupils obtained grades sufficiently high to entitle them to pass in their work.

Having extra duties this year to perform in arranging and cataloguing for the university library 1,000 new books, I found it impossible to perform all the work which properly belonged to this department, and hence I was glad to avail myself of the proffered help of others. In this way, only fourteen out of the twenty-one classes, enrolling 220 pupils were left to my charge. Of the seven classes of which I was relieved, one in geography was taught by Prof. French, three in geography, one

in physical geography and one in the history of the United States, by Miss Finley and one in physiology by Prof. Parkinson. To the three teachers here named I am greatly indebted for the assistance so kindly and cheerfully rendered.

In addition to the regular daily work in my department and in the library, I had charge, for twenty-five weeks, of the Normal assembly hall, two hours each day; and in conformity to the act of the Board of Trustees, establishing regular Sunday afternoon lectures on Manners and Morals, I prepared and delivered during the year four lectures to the Normal students.

Keeping in mind that Normal schools are for the training of teachers for the public schools, it has been my aim not to allow a single day to pass without at least some instruction in matters pertaining to methods of teaching, while every month several days are wholly spent in studies in methods, illustrations of methods, lectures, debates. In all the "teachers' " classes in geography and history, it has been an especial aim to make every recitation tend in the direction of training teachers. From time to time various methods of class drill have been introduced and their merits and effects fully discussed. Pupil teachers, after considerable training, have been from time to time called on to conduct classes. This drill, together with subsequent suggestions, has been of considerable utility not only to the one conducting but also to those composing the class. This drill in this department is additional to the regular systematic study of "the science and art of teaching" pursued elsewhere in the university, under the charge of teachers devoting the chief part of their time to this work.

Respectfully submitted.

GRANVILLE F. FOSTER.

VIII. Department of Arithmetic and Astronomy.

ROBT. ALLYN, LL. D., *Principal Southern Illinois Normal University.*

DEAR SIR:—The following is a summary of the work in my department for the year 1878-79:

Number of classes, 17; aggregate number of pupils in classes, 518.

	First Term.	Second Term.	Third Term.
Class D - -	30	16	21
" C - -	22	39	41
" B - -	64	36	46
" A - -	28	69	40
Methods - -		31	18
Astronomy - -		17	
	144	208	166

About 70 per cent were successful in their work.

During the first term class B was divided into two sections and the

recitations were heard at different hours.

The second term class D was taught by Miss Annie C. Wheeler and class C by Mr. Joseph Gray, pupil teachers. Both were quite successful. The A class was divided into two divisions.

The following syllabus shows the character of the work done in the respective classes:

ARITHMETIC—*Class C.*

Fractions—Definitions; reading and analysis of fractional expressions; discussions of propositions; greatest common divisor; least common multiple; reduction of fractions to lowest terms, to higher terms; improper fractions to whole or mixed numbers; mixed numbers to improper fractions; fractions to common denominator, to least common denominator; addition, subtraction, multiplication and division of fractions; nature of a decimal fraction; reading and writing decimals; reduction of common fractions to decimals and decimals to common fractions; addition, subtraction, multiplication and division of decimals; solution of text book examples; original examples by members of the class; reasons required for the processes; compound numbers; tables; examples; longitude and time.

ARITHMETIC—*Class B.*

Percentage—Terms and definitions; analysis and formulæ; making and solving original examples; interest—aliquot parts and decimal methods; common, exact, annual and compound interest; partial payments—United States rule, merchant's rule; essentials to the validity of every promissory note, and making examples; discount—trade, bank, true; insurance; taxes; averaging accounts; partnership, ratio and proportion.

ARITHMETIC—*Class A.*

Powers and roots; square; cube; number of figures in the square of a number; in the cube of a number; square root; cube root; number of figures in the root of a number; square of a number made up of tens and units; cube of a number made up of tens and units square root formula; cube root formula; writing cube root rule from the formula; solution of examples; original examples made by the class; metric system; meaning of terms used; tables; reducing metric to common measure, and common measure to metric; review principles of fundamental rules; review fractions explaining carefully all principles; thorough review of percentage with its applications; ratio and proportion.

ARITHMETIC—*Method Class,*

Methods of mental arithmetic; advantages and disadvantages of mental arithmetic; advantages of writing mental and written arithmetic; method of conducting black-board exercises; illustration of the law that a unit of any order is made up of ten units of the next lower order; composition of the period in numeration and how the periods are named; the named orders of figures; use of numerical frame; how the black-board and slate can be used instead of it; importance of

slates to primary students; how to teach the tables, especially the addition and multiplication tables; method of adding by complements; subtracting by the same; Grube's method of elementary instruction; object to be attained in teaching primary arithmetic; methods in fundamental rules for advanced classes; G. C. D. three processes; L. C. M. methods in fractions—inductive, deductive; compound numbers; methods in percentage and its applications; ratio and proportion; powers; roots; metric system.

ARITHMETIC—*Class D.*

Terms and definitions; reading and writing numbers; special attention to drills on the tables; solution of text book examples; pupils taught to make and solve original examples; thorough familiarity with all the processes insisted upon.

This class does not belong to the course of study, and has only been taught to accommodate some who were not qualified for the regular classes.

ASTRONOMY.

Early history; Ptolemaic and Copernican systems; Kepler's laws; law of gravitation; systems of circles—horizon, equinoctial, ecliptic; solar system—sun, planets, satellites, asteroids, meteors, comets and zodiacal light; orbits of the planets; the seasons; parallax; time; refraction; eclipses; tides; study of constellations with night observations; use of the telescope; lecture on the origin of the solar system; lecture on the probabilities and improbabilities of the interplanetary spaces being occupied by an ether; lecture on the future of the solar system; a lecture, are the planets, other than the earth inhabited; original essays by class.

Through the courtesy of the Board of Trustees the department has been presented with McVicker's Telluriam globe. It is a very useful instrument for explaining a number of astronomical phenomena.

In connection with Prof. Parkinson, I have had charge of the spelling exercises of the university during the year. Over three thousand words have been spelled: fall term, 1,300; winter term, 1,000; spring term, 750.

At the commencement of each term a general examination was held and any student misspelling three or more words in a list of one hundred, was required to go into a spelling class. The words were selected by Dr. Allyn from the columns of a daily newspaper. Those misspelling less than five words were organized as class A; five words and less than ten, as class B; ten words and less than fifteen, as class C; fifteen words and upwards, as class D. On account of its large size class D was divided into four divisions. Pupil teachers, who, by good work had merited exemption from spelling, were appointed to pronounce the words and have special charge of these classes and divisions. I made it my duty to visit each of these classes at every spelling and observe the order and work done. The pupil teachers were Mr. Thomas Brown, A class, three terms; Mr. Arthur Parkinson B class, one term, Mr. James H. Beatty two terms; Mr. Charles Hull C class, three terms;

Henry A Kimmal division of D, three terms; George H. C. Farmer division of D two terms; Miss Annie Wheeler same division, one term; Andrew C. Burnett division of D. two terms; Prof. Jerome same division, one term; Miss Maggie Kennedy division of D, one term; Mr. Lyman T. Phillips same division, one term; Miss Dora A. Lipe same division, one term.

Some of the pupils spelling very badly, class E was organized about the middle of the fall term, and Mr. Wallace E. Mann took charge of it It was hoped this class would soon be discontinued for want of material but it has held on its way during the year.

The following system of transfers from one class to another was adopted. Five words a week misspelled by a member of the A class, transfers the pupil to the B class, eight words in B to the C class, ten words in C to the D Class, twenty words in any of the classes to the E class. One week without misspelling a word promotes from the E to the D class, two weeks from D to C, two weeks from C to B, two weeks from B to A, five weeks in A excuses permanently from spelling.

About fifty words were assigned as a spelling lesson. The pronouncers selected from the list twenty-five words to be spelled. All the pupils were required to have writing spellers and write the spelling lessons. Correctors were appointed and the lessons were examined and corrected each day. Good results have been obtained.

In compliance with an order establishing Sunday afternoon lectures, I have prepared and delivered three lectures during the year at such times as were assigned me by the president. Subject of the first lecture, Excellence; second lecture, Earnestness; third lecture, Beauty.

During the third hour of each day throughout the year, I have had charge of the Normal hall. I kept a list of all the students and the seats which they occupied, so that none could be absent from the hall or out of their seats without my knowing it. Speaking, leaving seats, consulting reference books, going out were only allowed by permission. I am happy to report that there has been nothing but general good order during the year.

I have this year lost one day from sickness. This is the only time since my connection with the Normal.

In all the work of the year it has been constantly in mind that education is not the mere work of gaining knowledge, but discipline. Discipline and knowledge are two things. Discipline is the great, permanent ground fact of education. Knowledge only supplies the material to be worked up. Discipline makes the soul a strong, tough bundle of thinking muscles. Knowledge only furnishes the instruments. Discipline charges the mind with electricities of thought and sentiment, and makes it capable of using knowledge in all departments. It makes the intellect an engine of strength. Knowledge is the servant, discipline is the master. A thorough discipline will give to the state teachers who

will waste none of their energies, but make them all do execution.

Respectfully submitted,

A. C. HILLMAN.

IX. Department of Grammar and Book-Keeping.

ROBT. ALLYN, LL. D., *Principal Southern Illinois Normal University.*

DEAR SIR:—The following is a summary of the work in this department for the year 1878-79:

FALL TERM.

Grammar, D, three divisions	70	Members.
" C, two divisions	49	"
" B	28	"
Primary Grammar	14	"
Book-Keeping	28	"
Total for term	189	

WINTER TERM.

Grammar, D	28	Members.
Grammar, C, three divisions	87	"
Grammar, B	34	"
Grammar, A	14	"
Primary Grammar	6	"
Analysis	13	"
Book-Keeping	21	"
Total for term	203	

SPRING TERM.

Grammar, D	37	Members.
Grammar, C	30	"
Grammar, B, three divisions	81	"
Primary Grammar	6	"
Analysis	13	"
Book-Keeping	20	"
Total for term	187	
Total for the year	579	

Of the above classes, during the fall term two divisions of class D were taught by pupils, Misses Dora Lipe and Ida McCreery. The former showed great ability in her work, and the latter gave entire satisfaction.

The seventh week of the fall term Miss Finley entered upon her work as a teacher, taking one division of class D, one of class C, and the primary class. Second term she took class D, two divisions of class C, and primary. Third term, class D, class C, and primary.

The membership in this department shows an increase of 126 pupils over last year, being nearly 28 per cent in a department already large. The addition of Book-keeping to a department so well filled, as gram-

mar makes a very heavy work. It has required me to spend six hours in actual teaching each day.

Respectfully submitted,

MARTHA BUCK.

X. Department of Drawing and Writing.

ROBT. ALLYN, LL. D., *Principal Southern Illinois Normal University.*

DEAR SIR:—The following is a summary of the work in this department for the year 1878-79:

DEPARTMENT OF DRAWING.

Number of pupils enrolled	first term	-	-	53
" " "	second term	-	-	86
" " "	third term	-	-	62
				201

The work during the year just finished has been conducted in accordance with the system adopted the preceding year, and the results thus attained demonstrate that thorough instruction in morphology and the fundamental principles of perspective should constitute the first work of the student in drawing, thus supplying a knowledge which will enable him to delineate whatever his ideality may prompt or his practical thought suggest.

Twenty-six have completed the course, and a large number have passed in the work of the first and second terms.

An effort to develop a taste for industrial drawing, has been made with encouraging results, especially among the younger pupils, who have evinced a gratifying degree of taste and pleasure in the work.

All have, with few exceptions, displayed earnestness and zeal in their work, and numbers have given evidence of genuine artistic talent.

Special attention has been given to free hand drawing on the board—requiring the pupils to delineate from memory the outlines of familiar objects, thus forming correct ideas of their relative proportions, and giving them proper perspective delineation.

The work although far from attaining the desired excellence, has given evidence of progress, and we trust will not prove barren of good results.

DEPARTMENT OF WRITING.

In the department of writing, we have this year, as last, been assisted by pupil teachers, all of whom have done excellent work. The assistants during the first term were:

Thomas Brown	—No. pupils enrolled	-	-	32
F. P. Rentchler	" " "	-	-	23
W. F. Noetling	" " "	-	-	21
Sarah Saul	" " "	-	-	23
				99

Assistants for second term were:

Thomas Brown—No. enrolled	-	-	-	-	39
F. P. Rentchler " "	-	-	-	-	34
W. F. Noetling " "	-	-	-	-	19
L. T. Phillips " "	-	-	-	-	45
					137

Assistants for third term were:

Thomas Brown—No. enrolled	-	-	-	-	31
F. P. Rentchler " "	-	-	-	-	31
John M Pierce " "	-		-	-	36
Frank L. Boyd " "	-	-	-	-	20
					118

The students in all the classes throughout the year have, with rare exceptions, been prompt, neat and diligent in executing the work assigned them and have given evidence of fair improvement.

Respectfully submitted.

HELEN M. NASH.

XI. Department of Geography and Elements of Language.

ROBT. ALLYN, LL. D., *Principal Southern Illinois Normal University.*

DEAR SIR:—I herewith submit report of classes taught by me during this year. I began teaching October 28.

	Pupils.	Dropped.	Passed.
FALL TERM.			
Geography - - - -	22	2	14
Grammar, D - - - -	16		14
Primary Grammar - - -	14		
Latin Elements - - -	21	4	12
Grammar, D - - - -	21	2	14
WINTER TERM.			
Geography - - - -	29	8	11
Latin Elements - - -	10	1	7
Grammar - - - -	27	6	12
Grammar--2 classes - -	47	10	25
Primary Grammar - -	8		
SPRING TERM.			
Geography - - - -	35	9	13
History United States - -	35	15	12
Physical Geography - -	14	3	8
Grammar - - - -	37	13	19
Grammar - - - -	26	4	15
Grammar, D - - -	15	3	4
Primary Grammar - - -	6		

Respectfully submitted.

ESSIE C. FINLEY.

XII. Report of the Curator of the Museum.

ROBT. ALLYN, LL.D., *Principal Southern Illinois Normal University.*

DEAR SIR:—I beg leave to submit the following as my report upon work done in the Museum during the year now drawing to a close:

When I took charge of this work, the first of July, I found a quantity of material already there that needed to be classified and labeled, but thought it advisable to leave this to be done during the winter months when little could be collected, and therefore spent all the time I could during the summer in collecting new material. During the month of July I devoted all my time to this work but after the special session began in August, only a portion of my time was devoted to collecting. After the regular fall term began in September, as much of my time as could be spared from the school duties was devoted to the same work until some time in November when the weather became too cool to find plants or insects sufficiently numerous to make further persistent collecting profitable. The collecting during the winter till the season opened this spring, was only occasional. As I have had more work in the school during the spring term I have had only a smaller portion of time for collecting.

Before speaking further of the collections made and of the other work done in this direction, it may be well to speak of changes made in the Museum for the purpose of preserving and caring for specimens. Among those may be mentioned first, a fine insect cabinet containing seventy-two drawers, 16x19 inches, with glass tops, for holding and preserving from injury of light and museum pests, the valuable collection of insects now on hand, and to which we expect to make additions from time to time. This is so made that the drawers are not only themselves tightly closed by the close fitting tops, but the whole is closed by two panelled doors. This was made by R. Romig, a cabinet maker in town, at a cost of $95. This expense covered only the material and manufacture of the wood work and the oil finish given to the black walnut of which it is made. To fit it for use the drawers were to be lined with cork and the insides papered. Cork suitable to line about half of them was obtained from Philadelphia, and I have finished nearly a third of the drawers, the most of which are filled with insects, arranged as they occur in our systems of classification. Of these I will speak more fully under that subject.

That the plants of the herbarium might be cared for, five dozen new boxes, similar to the half dozen already in use, were purchased in Chicago at $3 per dozen. Shelves have been arranged for these; and I have prepared labels for the whole sixty-six boxes, each label stating the number of the box, and its contents. Further mention will be made of the contents of the head of Botany.

Although a quantity of museum jars and bottles were obtained last year for the purpose of suitably caring for the alcohol specimens, all

the larger ones proved to be unsuitable for the purpose and were returned. In consequence of this the larger specimens were in jars and bottles where it was impossible to properly preserve them without too much of a waste of alcohol. To meet the want in this direction a quantity of jars and bottles of a recent pattern were obtained from Philadelphia. The materials in this department not already in suitable jars have mostly been transferred to the new ones, and with the exceptions of a very few species, have been named and labeled. This work was done mostly during the fall and winter. Besides the specimens in this department on hand at the beginning of the year, a few new ones have been added. These additions consist in a few specimens of fish, a few reptiles, mostly belonging to the order Ophidia or snakes, and a few species of Batrachians; besides I have deposited in the museum my private collection of this class of specimens consisting of about thirty bottles, a number of the species not being found there before.

It has been found that the insects that were exposed to the light in the wall cases were very much injured, some being so faded as to be of little value for the purpose of study or show. For this reason the specimens obtained during the year have not been put in these cases, but are part of them in the cabinet and part in boxes, where they can be kept from the action of the light until they can be classified and put in the cabinet. It is recommended that sliding doors be placed in front of these cases that the specimens may be kept from the light when not needed to be shown for class use or other purposes.

But little has been done during the year in taxidermy, as Prof. Parkinson has already prepared quite a number of birds and other animals, and it was thought best to bring up other parts of the work till they would compare partly at least with what had been done in this. Enough was done however, to illustrate the methods of doing this work to students on several occasions, and to preserve some rare specimens. Among the specimens mounted are a fine Bald Eagle (Haliætus Leucocephalus, L), shot by W. W. H. Mansker of Fountain Bluff; and several specimens of the Southern Wax Wing (Ampelis Cedrorum, Bd), furnished by H G. Easterly; a red bird (Pyranga Æstiva, L), by E. Spreecher, and a Flying Squirrel (Sciuropterus Volucella, Pall), by Walter Waggoner. The finest acquisition to the museum, however, in this line is the Alligator Gar (Litholepis Spatula, Lac). This was caught in the Big Muddy river, near Murphysboro, and was prepared by Prof. Parkinson and Dr. E. B. Chapin.

MINERALS, FOSSILS, ETC.

These cases are substantially as they were arranged by Prof. Parkinson previous to my taking charge of the museum work. We are indebted to the following persons for specimens placed opposite their names, which form a few of the additions that have been made during the year:

W. W. H. Mansker—Fossils, and on the grounds outside, Gov. Duncan's Wash Basin.
J. G. Sims, and J. Martin—Lepidodendron fossils.
Mrs. Mary M Mitchell, of Corinth—Fossils, minerals, Indian relics and shells.
S. M. Walker, Centralia—A large hornet's nest.
A. M Johnson, Centralia—Fungus from an oak tree.
Sarah Saul—Several rare insects.
Isaac Farner—Leaf and fruit of Yellow Nelumbium.
Richard Toney—Bird's nest.
G. W. Harwood—"Jagged iron ore," from Iron Mountain, Mo.
Wm. Williams—Calcite and galena, from Missouri; also winged sweet gum.
J. Wrightly, Cobden—Iron nodule.
A. G. Jones and W. C. Dowell—Photograph of Indian pottery.
Willie Reevis—Stone hatchet.
Prof. S. A. Forbes, Normal—Casts of two fossils.
Dr. F. R. Waggoner—Anatomical preparation and specimen of corn, etc.
Ada Harwood, John Martin and Alicia Mulky—Snakes.
May Copeland—A turtle.
E. Kirkpatrick, Anna—Specimens of clay.
Dr. G. M. O'Hara—Fossil fern, and insects.
Dr. Allyn—Coal fossils, etc.
Chester Penitentiary Commissioners—Minerals, etc.
Mr. Tierney, the janitor—A number of specimens of insects.
I. Caldwell—Specimen of corn, etc.
S. E. North—Specimen of corn, etc.
E. Palmer—Tall prairie grass.

Many of these are not to be found in the museum cases mentioned above, but are placed here to save a detailed enumeration elsewhere.

FISHES, ETC.

As intimated elsewhere, the principal work done with these has been to classify material already in the museum and get it into bottles more suitable for its preservation. A few new specimens have been added consisting of a few fishes, reptiles and other small vertebrates, collected by myself, with a few more collected chiefly by the students. I have, as opportunity afforded, made collections of specimens that will be useful in illustrating comparative anatomy in our zoology and physiology classes. As yet this part of the collection consists of parts of skeletons of different animals, some having been previously collected, and a few hearts and other organs in alcohol, so prepared as to show their internal structure, together with a number of microscopic slides, prepared to show some of those organs and parts of organs that are too small to be seen only by the aid of the microscope. It is my object to increase

this collection until it shall become an efficient aid to the class room work.

CONCHOLOGY.

To the collection of shells gathered together by Prof. Thomas and placed in the museum, additions have been made as follows:

Sarah Saul, of Cairo—Eighteen specimens of marine shells.

S. A. Forbes, from State Laboratory—A box of land and fresh water shells of the State.

This is intended to be, with what was in the museum before, a nearly if not quite complete set of the shells of the state. The specimens in this collection are not as yet arranged as we expect them to be finally.

BOTANY.

At the time of taking charge of the museum work, the herbarium consisted of 488 species of mounted plants. During the season I collected a little over 3,800 specimens, representing about 325 species. Of these 228 were new to the herbarium. These have been mounted and placed in the boxes. With the rest of the material, together with some duplicates from my own collection, exchanges have been made as follows: With Wm. West, of Bradford, England; Mr. Greene, Bristol, England; Rev. Thomas Morong, Ashland, Mass.; Dr. Geo. Vasey, Department of Agriculture, Washington D. C., Southern plants; H. N. Patterson, Oquawka, Ill., and of Wm. Harvey, Bradford, Ill., Oregon plants. As might be expected in receiving packages from so many parties the same season, there would be some duplicating each other. With the American plants there was very little of this, as will be seen by the table below, but with English plants there was more of it. The duplicates are not a loss however, to the herbarium, but are valuable for comparison, and for future exchange. Besides this I have a large quantity of duplicates in my private herbarium, from which I think I can find at least 500 species not now in the museum herbarium. Including this estimate, the herbarium contains plants as follows:

At the beginning of the year			488
From the year's collecting			228
" Morong	Total received 52	New to herb.	52
" Vasey	" 192	"	186
" Patterson	" 36	"	33
" Greene	" 260	"	250
" West	" 405	"	247
" Harvey	" 17	"	16
" My duplicates			500
Total number species			2,000

The above is given in the order in which the packages were recorded in the herbarium catalogue, and of course each line shows what were new to the herbarium after those above it had been recorded. A quantity of paper has been obtained for mounting these plants, and what have not already been mounted will be done as soon as possible.

INSECTS.

The interest the general public has in these animals, together with the space given to them in our school works on zoology, have induced us to devote some time during the year in collecting and arranging this cabinet. At the opening of the year there was a considerable quantity of material in the wall cases, representing all the orders of insects. These had been placed there by Prof. Thomas in his double capacity as Curator and State Entomologist. It was expected that a set of these, or so far as needed, would remain in our cabinet while the rest would be used by him as State Entomologist. But little has been done with these specimens save what has been done by Prof. Thomas, and that consisted in saving out such as were needed in the museum cabinet as he selected from the boxes for his own work. In this he has set aside for us as complete a set as he had of the order Orthoptera. I collected and pinned, from the first of July to the close of the season, about 850 specimens, a majority of which were Lepidoptera. Besides these I placed in the cabinet several hundred specimens from my former collection, making over a thousand specimens added during the year. With the exception of a few hundred specimens these have all been named and labeled.

Besides this material, representing quite a number of species in all the orders, insects have been obtained from other places as follows: A choice collection of 105 specimens of foreign Lepidoptera, representing 86 different species. These were purchased to represent genera not found in the state, for the purpose of comparison in study. Besides this, exchanges have been made in Lepidoptera with Adolph Conradi, Bethlehem, Pa.; J. S. Baily, M. D., Albany, N. Y.; G. W. Belfrage, Clifton, Tex.; J. Elwyn Bates, South Abbington, Mass., and C. E. Worthington, Chicago, Ill., using the material collected after setting aside a set for the museum. By this means quite a number of species have been added to those obtained here; though in some cases only a small number of species were obtained from an exchange. During the past year exchanges have been made only in Lepidoptera, but it is expected to use the surplus material we have in the other orders hereafter in the same way until we have a good representation of all the orders. Just how many species are now to be found in the cabinet I cannot say; nor how many were added by the exchanges, as in some instances a few of the same species were obtained from different persons, and at the time a record was not made of it. I may here express my thanks for favors received in this department from A. R. Grote, Buffalo, N. Y., J. A. Lintner, Albany, N. Y., Herman Strecker, Reading, Pa., and Wm. H. Edwards, Coalburgh, W. Va.

As our text books on zoology contain no analytical tables, but little practical analytical work can be done in the class room by classes in that study for want of these. Even where tables are to be had in some of the groups of animals, as the birds and other vertebrates, by using

some other book only a single copy is often accessible; while in other groups, as of our insects, no such tables are to be had. To meet this want, that more thorough work may be done, it has been thought advisable that tables of some of the groups of animals of the State be prepared from time to time and published with the museum report that they may be accessible for use in our classes. In accordance with this idea, I have prepared and present below, such tables of the Diurnal Lepidoptera of Illinois, as the first of such series.

In arranging these tables my plan has been to include, not so much what I know to have been found in the State as those species whose food plants are found here in quantity, or whose geographic range bring them within our limits. With a very few species I have been obliged to depart from this plan because I have been unable to obtain the specimens to describe; but these instances belong mostly to the more obscure Hesperidæ, seldom seen, and hence will mar but little the usefulness of the tables. In the arrangement I have followed mostly the plan of the botanical tables in Gray's "How Plants Grow;" the first part consisting of tables of the families and genera, the second, tables of species. In this I have sometimes taken advantage of local restriction to use such characters as could not be used if the tables were made to include all known species instead of the species of our state.

ANALYTICAL TABLES
OF THE
BUTTERFLIES OF ILLINOIS.

† Antennæ filiform, terminating in a knob or club —Butterflies.

†† Antennæ variable, never terminating in a knob or club - - - - - - - - - Moths.

TABLE OF FAMILIES.

A. Having six feet adapted for walking.
 a. Wings closed back to back and erect in repose.
 b. Colors black, white or yellow, size generally from medium to large - - - - - - - Papilionidae, A.
 bb. Colors Blue, coppery or blackish, size generally small - - Lycaenidae, C.
 aa. Wings spread in repose, or closed and thrown far back . - Hesperidae, D.

AA. Having four feet adapted for walking, the first pair aborted - - Nymphalidae, B.

Note.—That the terms large, medium and small as used here may not be differently understood, I will say that I have used the term small to designate the butterflies having an expanse of wings less than one and a quarter inches, medium from an inch and a quarter to two inches and a quarter, and large all above two inches and a quarter.

TABLE OF GENERA.

A. *GENERA OF PAPILIONIDÆ.*

A. Hind wings tailed - - - - - - - - Papilio, 1.
AA. Hind wings not tailed.
a. Antennae abruptly terminating in an ovoid club.
b. Abdomen shorter than the hind wings, color white or yellowish white.
c. Under side of hind wings plain, or marked along the veins Pieris, 2.
cc. Under side of hind wings covered with a greenish network Anthocharis, 4.
bb. Abdomen longer than the hind wings, color bright yellow; small - - - - - - - Nathalis, 3.
aa. Antennae truncated at the end, or terminating insensibly in an obconic club.
b. Wings robust size medium or large.
c. Antennae terminating insensibly in a club - Callidryas, 5.
cc. Antennae terminating in a distinct obconic club, straight Colias, 6.
bb. Wings thin, delicate; antennae slightly bent - Terias, 7.

B. *GENERA OF NYMPHALIDÆ.*

Danaine.

* Palpi remote, not extending much beyond the head, discal cell of hind wings closed.
a. Hind wings of males with black spot in the middle of wing on a vein - - - - - - - - - Danais, 8.

Nymphalinæ.

** Palpi nearly connivent, porrect, nails of tarsi strongly bifid, discal cell generally open, veins not dilated.
A. Club of antennae flattened.
a. Outer margin of fore wings sinuous
b. Silver spot on the under side of wings - - Agraulis, 9.
bb. No silver spots - - - - - - - Euptoieta, 11.
aa. Outer part of fore wings not sinuous.
b. General color (except female of Diana) fulvous, under side of wings (except Bellona) with silver spots - Argynnis, 10.
bb. General color black, marked with red and yellow Melitaea, 12.
bbb. General color fulvous, prominent black border, no silver spots - - - - - - - Phyciodes, 13.
AA. Club of antennae not flattened.
a. Eyes hairy.
b. Golden or silver spots on the underside of hind wings - - Grapta, 14.
bb. No golden or silver spots on the under side of hind wings.

c. Apex of fore wings distinctly truncate, the angles sharp - Vanessa, 15.

cc. Apex of fore wings somewhat truncate, the angles rounded Pyrameis, 16.

aa. Eyes naked.

b. Apex of fore wings rounded, margin of hind wings more or less dentate.

c. Antennae terminating abruptly in a large obconic club - - Junonia, 17.

cc. Antennae gradually terminating in a club.

d. Wings without eye spots - - - Limenitis, 18.

dd. Wings with eye spots - - Apatura, 19.

bb. Apex of fore wings acute, hind wings tailed - Paphia, 20.

Satyrinæ.

*** Palpi close, elevated, very hairy; discal cell always closed; veins of fore wings usually dilated at base.

a. Wings entire, eyes hairy or naked - - Neonympha, 21.

b. Wings dentate, hind wings strongly angled in the middle, eyes hairy - - - - - - - - Debis 22.

c. Hind wings dentate, eyes naked - - - Satyrus, 23.

Lybythinæ.

**** Palpi several times as long as the head, contiguous, in the form of a beak; males four footed, females six footed.

a. Wings angular - - - - - - - Libythea, 24.

C. *GENERA OF LYCÆNIDÆ.*

* Palpi projecting in front scarcely the length of the head, antennae reaching to the middle of the fore wings.

a. Color blue, black or blackish brown; the hind wings dentate, or with one or more tails - - - - Thecla, 25.

** Palpi projecting in front more than the length of the head, antennae not reaching to the middle of the fore wings.

a. Colors above fulvous or coppery and black.

b. Wings fulvous, border of fore wings and base of hind wings black - - - - - - - - Feniseca, 26.

bb. Wings coppery or purplish black with fulvous bands - - - Chrysophanus, 27.

aa. Colors above blue, or bluish black - - Lycaena, 28.

D. *GENERA OF HESPERIDÆ.*

A. Knob of antennae thick ovoid, or elongate ovoid.

a. Knob without a hook or bent projection at the end.

b. Last joint of antennae ending in a slender, very short spine - - Ancyloxypha, 29.

bb. Tip of antennae conical, blunt, straight - Thymelicus, 30.

bbb. Knob rounded at the tip, straight or semilunar - Pyrgus, 33.

aa. Knob ending in a hook or bent projection.
b. Hook much contracted, nearly half as long as the knob - - - Pamphila, 31.
bb. Hook slender, conical - - - - - Amblyscirtes, 32.
AA. Knob of antennae spindle shaped.
a. Palpi surpassing the front by more than the length of the eyes, gray below - - - - - - - - Thanaos, 34.
aa. Palpi surpassing the front by about the length of the eyes, white below - - - - - Pholisora, 35.
aaa. Palpi surpassing the front by less than the length of the eyes, gray below - - - - - - Eudamus, 36.

TABLE OF SPECIES.

PAPILIONIDÆ.

1. *Papilio.*

Head large; eyes prominent, palpi very short; body more or less hairy, free from the wings; wings robust, the hind wings of ours ending in prominent tail.

a. Ground color black.
b. Wings crossed by six or more greenish yellow bands - P. Ajax.
bb. Wings crossed by two rows of yellow spots.
c. Rows of spots marginal - - - - - P. Asterias.
cc. Rows not marginal - - - - - P. Cresphontes.
bbb. Wings crossed by a single row of marginal spots.
c. Hind wings bright greenish black or black, spots faint above P. Philenor.
cc. Hind wings dull black, a yellowish green or blue band in the middle - - - - - - - - P. Troilus.
aa. Ground color yellow, wings crossed by black bands - P. Turnus.

NOTE.—A female form of P. Turnus occurs in which the ground color is dull black with the darker black bands more or less distinct. This is var. Glauca.

2. *Pieris.*

Head rather small, short; eyes naked; abdomen slender, a little shorter than the hind wings; our common white butterflies.

a. Fore wings with broad discal dash and submarginal row of spots - - P. Protodice.
aa. Fore wings without discal dash.
b. Wings without spots, dusky at base - - - P. Oleracea.
bb. Fore wings with one or two round spots towards outer ends, tips black - - - - - - - P. Rapae.

3. *Nathalis.*

Small yellow butterflies with the slender abdomen longer than the hind wings.

Tips and margin of fore wings, and anterior margin of hind wing, black - - - - - - - - - - - N. Iole.

4. *Anthocharis.*

White butterflies resembling Pieris but differing in having the tips of fore wings clouded with black either with or without yellow, and under side of hind wing with greenish network not following the veins;

a. No orange patch on tips of fore wings - - A. Olympia.
aa. Orange patch on tips of fore wings - - - A. Genutia.

5. *Callidryas.*

Antennae of moderate length, nearly truncated at the extremity; wings robust; yellow butterflies with ferruginous and sometimes brown markings.

a. Wings yellow, without orange.
b. Ground color clear pale yellow, costa and outer end of fore wings edged with brown, two discal silver spots enclosed in ferruginous on under side - - - - C. Eubule.
bb. "Ground color pale dirty yellow" marks heavier - C. Sennae.
aa. Wings dark yellow, patch of light orange on each wing - C. Philea.

6. *Colias.*

Antennae straight, short, rose red, terminating in an obtuse cone which is more than a fourth of the entire length; color yellow or orange with a black border, body and wings robust.

a. Ground color yellow.
b. Border broad, basal third of fore wings black - - C. Saesonia.
bb. Border narrow, base of wings yellow - - C. Philodice.
aa. Ground color orange.
b. The whole ground color orange - - - C. Eurytheme.
bb. Central portion of ground color orange with yellow next the border - - - - - - C. Keewaydin.

NOTE.—This is now regarded as a variety of C. Eurytheme.

7. *Terias.*

This genus differs from Colias in being smaller, the wings thinner, the body more slender and the antennae black with the knob slightly bent.

a. Ground color orange - - - - - - T. Nicippe.
aa. Ground color yellow - - - - - - T. Lisa.

NYMPHALIDÆ.

8. *Danais.*

This genus contains one large fulvous species with black veins and a black outer border, containing two rows of white spots, but no black line marking the outer third of the hind wing - - - D. Archippus.

9. *Agraulis.*

Fore wings prolonged at apex, color fulvous, about four black spots, pupiled with white, in the discal cell, large silver spots on under side - A. Vanillae.

10. *Argynnis.*

Head large; antennae terminated by a flattened, grooved club; abdomen shorter than the hind wings; color usually fulvous, marked with black, usually so lightly that the wings have a decided fulvous color; under side usually with silver spots.

a. Under side of wings with silver spots.
b. Wings of male dark fulvous, female blue, outer third lighter in both - - . - - - - - - A. Diana.
bb. Fore wings fulvous, hind wings black - - A. Idalia.
bbb. Both wings fulvous.
c. Basal part of wings plain brown.
d. Inner half plain brown, dark - - - A. Cybele
dd. Less than inner half plain.
e. Under side of hind wings with light submarginal band.
f. Color of under side of hind wings light brown - - - A. Aphrodite.
ff. Color of under side of hind wings maroon A. Atlantis.
ee. Under side of hind wings without submarginal band. - - A. Alcestis.
cc. Basal part of wings not differing from the rest, size medium A. Myrina.
aa. No silver spots, size medium. - - - - A. Bellona.

11. *Euptoieta.*

Resembling Argynnis but the outer margin of the wings are sinuous and the apex of fore wings more prolonged. Base of wings are dusky brown, the middle buff, outer part fulvous - - - E. Claudia.

12. *Melitaea.*

General color black, ours marked with red and yellow above, the silver spots of Argynnis replaced by yellow; the red on outer border and two spots in the discal cell - - - - - - M. Phaeton.

13. *Phyciodes.*

Smaller or medium sized species of butterflies resembling Argynnis but quite heavily marked with a black, no silver spots on under side.

a. Under side of hind wings fulvous, a central and basal band of buff spots, submarginal lunate spots white - - P. Harrisii.
aa. Under side of wings brownish or brownish yellow.
b. Broad central band of white or light buff on under side.
c. Submarginal row of dark brown spots pupiled with white, marginal lunules very irregular - - P. Nycteis.
cc. Submarginal row of spots not pupiled, marginal angular line of white instead of lunules - - - P. Carlota.
bb. Central band narrow or wanting, submarginal row of spots small - - - - - - - - P. Tharos.

14. *Grapta.*

Butterflies with wings excised and angled, the upper surface some

shade of fulvous, spotted with black, the lower surface veined with different shades of brown; on the under side of hind wings a small golden or silvery mark resembling the letters C, L, or an interrogation point, body robust; abdomen about half as long as hind wings.

a. Spots in the middle of discal cell wholly or partially separate.
 b. Fore wings with submarginal row of four black spots, the posterior double - - - - - - G. Interrogationis.
 bb. Fore wings with submarginal row of three spots.
 c. Posterior spot double.
 d. Silver mark, a distinct comma - - - G. Comma.
 dd. Silver mark an open L.
 e. Under side of wings nearly uniform brown - G. Satyrus.
 ee. Under side brownish ochre, a central brown band - - G. Gracilis.
 cc. Posterior spot single.
 d. Under side fawn color, marked with brown and lilac - - G. Faunus.
 dd. Under side dark brown, a light band crossing the fore wings - - - - - - - G. Progne.
aa. Spots in discal cell blended into a transverse dash - G. J. Album.

15. *Vanessa.*

Butterflies similar to Grapta, but no silver spots on under side of hind wings, and varying in color; clothed with long hairs; eyes densely hairy.

a. Ground color maroon brown, outer margin yellow supplemented by row of blue spots - - - - - - V. Antiopa.
aa. Ground color brown, submarginal band fulvous - V. Milberti.

16. *Pyrameis.*

Apex of fore wing somewhat truncate, angles rounded, colors above reddish fulvous and black, variously reticulated below, with submarginal row of eye spots on the under side of hind wings.

a. Ground color black, transverse line on fore wings, and outer border of hind wings reddish fulvous - - - P. Atalanta.
aa. Ground color fulvous.
 b. Five eye spots on under side of hind wings - - P. Cardui.
 bb. Two eye spots - - - - - - - - P. Huntera.

17. *Junonia.*

Differing from Pyrameis in the eyes being naked, and the ground color being yellowish brown. Two eye spots on the hind and one on the fore wings above - - - - - - - - J. Lavinia.

18. *Limenitis*

Head a little narrower than the thorax; antennae nearly the length of the body, terminating insensibly in an elongate club; wings wide, dentate, destitute of eye spots, and not tailed.

a. Wings black.

b. Without median white bands, two red spots at the apex - L Ursula.
bb. With white bands through the middle of the wings.
c. White bands narrow, only on fore wings - L. Proserpina.
cc. White bands broad, through all the wings - L. Arthemis.
aa. Wings fulvous, black border, hind wings with black line marking the outer third of wing - - - - - L. Disippus.

19. *Apatura.*

Eyes large; antennae terminated by an elongate cylindrical club, the end of which is yellow; wings slightly dentate, apex of fore wings prolonged, color yellowish or russetty brown, with eye spots.
a. Eye spots on both sides of both wings - - - A. Celtis.
aa. Eye spots absent from the under side of fore wings - A. Clyton.

20 *Paphia.*

A coppery butterfly, with the apex of the fore wings pointed and the hind wings tailed - - - - - - - - - P. Andria.

21. *Neonympha.*

Head small; antennae very short; annulated with white; palpi densely clothed in front with long, bristly hairs; wings entire, eye spots at least below.
a. Wings brownish black.
b. Eye spots above. - - - - - - - N. Eurytris,
bb. No eye spots above - - - - - - - N Sosybius.
aa. Wings russetty, eye spots prominent on both wings - N. Canthus.

22. *Debis.*

Differing from Neonympha in the wings being dentate, and the hind wings being strongly angled in the middle, eyes hairy - D. Portlandia.

23. *Satyrus.*

Eyes naked; tibia long, with a spur at the end; one or two veins on the fore wings dilated, hind wings dentate; color brown or black, usually with a broad whitish or yellowish band containing eye spots towards outer end of fore wings, under side of hind wings marked.
a. Fore wing with eye spots in yellowish band - - S. Alope.
aa. Eye spots without yellowish band - - - S. Nephele.

24. *Libythea.*

Black, middle of the wings fulvous, with three white spots near the apex of the fore wings - - - - - - L Bachmanni.

LYCÆNIDÆ.

25. *Thecla.*

Palpi nearly straight, the last joint naked, head narrower than the thorax; antennae with elongate clubs.
a. Hind wings with two slender tails.
b. Upper side deep blue with black border - - - T. M. Album.

bb. Upper side dusky or blackish brown.
c. Two orange crescents on hind wings above and below, one above indistinct - - - - - - T. Humuli.
cc. Dark brown above without marks.
d. Crescents on the under side of hind wings continuous, three or more white stripes on under side of fore wings - - T. Strigosa.
dd. Crescents separated by the blue space, two white stripes on under side of fore wings - - - T. Calanus.
ccc. Color yellowish brown, crescents and lines similar to Calanus T. Edwardsii.
cccc. Slaty brown above, yellow mark at anal angle, gray beneath T. Acadica.
ccccc. Middle of wings yellowish, green beneath marked with brown and white - - - - - T. Smilacis.
bbb. Black above tinged more or less with blue, red line beneath edged with white . - - - - - T. Poeas.
aa. Margin of hind wings simply dentate, no orange crescents beneath.
b. Brown beneath, outer half lighter.
c. A fine dark brown line separating the two colors - T. Augustus.
cc. A white line marking the separation - - - T. Irus.
bb. Dark brown, beneath two light bands on the hind wings and one on the fore wings edged with white - - . T. Niphon.
aaa. Hind wings entire, the anal angle sharp; dusky brown, beneath two rows of black dots, and a row of orange spots on the hind wings - - - - - - - - - T. Titus.

26. *Feniseca.*

Resembles Chrysophanus except in markings. Wings entire, marked beneath with brown spots circled with white - - F. Tarquinius.

27. *Chrysophanus.*

Palpi straight, last joint naked; head narrow, colors coppery or coppery black.
a. Color above black with a coppery tinge, gray beneath with black points.
b. Size medium, half row of orange crescents on under side of hind wings - - - - - - - - - C. Dione.
bb. Size small, crescents faint - - - - - C. Epixanthe.
aa. Color distinctly coppery, orange border on hind wings above and below.
b. Size medium - - - - - - - - - C. Thoe.
bb. Size small - - - - - - - C. Americana

28. *Lycaena.*

Colors above blue or bluish black, usually gray beneath marked with rows of black points, structural characters the same as Chrysophanus.

a. Hind wings without tails, color delicate azure blue with slight violet reflection, females with black border to fore wings.
b. Under side gray brown, with black spots circled with white - - L. Lygdamus.
bb. Under side light gray, females with heavy black border on upper side of wings, hind wings of males with distinct outer border of blue.
c. Expanse of wings from 1.2 to 1.4 inches - L. Pseudargiolus.
cc. Expanse 1.1 inches - - - - - - L. Neglecta.
bbb. Under side with large blackish spots, and a blackish outer border - - - - - - - L. Lucia.
aa. Hind wings with a thread like tail; color blue, or black tinged with blue; hind wings with two orange crescents - L. Comyntas.

HESPERIDÆ.

29. *Ancyloxypha*

Tibiae of hind legs with middle spurs: knob of antennae elongate, ovoid, rounded at tip, last joint with short slender spine; last joint of palpi free, long, erect; costa of hind wings longer than the posterior margin of fore wings, color, fore wings brown, with yellow each side of discal cell, hind wings yellow with brown border - - A. Numitor.

30. *Thymelicus.*

Tibiae of middle legs with a series of short spines; last joint of palpi half concealed, ascending; antennae half as long as fore wings; males with discal stigma on fore wings; color brown, yellow along costa, white on veins of under side of hind wings - - - T. Garita.

31. *Pamphila.*

Last joint of palpi conical, nearly concealed by hairs of the second; body stout, abdomen as long as the head and thorax; fore wings triangular.
a. Hind wings yellow, with brown border not more than one-third the length of the wings.
b. Fore wings yellow above.
c. Border not more than one-fourth the length of the wings.
d. Males without central black dash or stigma on fore wings.
e. A black spot near the apex - - P. Zabulon, male.
ee. No black spot at apex - - P. Delaware, male.
dd. Black dash or stigma through the middle of fore wings, border strongly dentate - - P. Phylaens, male.
cc. Border nearly one third the length of the wings.
d. Fore wings with central yellow band containing discal mark P. Delaware, female.
ccc. Fore wings with the brown occupying more than one-third the length, rather dark.
d. Stigma with a brown spot at its outer end - - P. Sassacus

dd. Stigma in a large brown spot - - P. Huron, male.
bb. Fore wings brown, a row of yellow dots making the outer third and one in the discal cell - - P. Viator.
aa. Hind wings brown with a central yellow band, fore wings brown marked with yellow.
b. Fore wings with yellow dots near the apex and in discal cell, and oblique yellow line below stigmata, yellowish along the costa - - - - - - - - P. Leonardus
bb. Subapical spots rather large, a dash of yellow in the discal cell and near the hind margin - - P. Huron, female.
bbb. A row of subterminal dots and one in the discal cell-P. Peckins.
aaa. Hind wings brown, the center with a more or less distinct wash of yellow; general color of fore wings brown.
b. Fore wings with subterminal row of yellow spots.
c. Row of spots, more or less distinct on the under side of both wings.
d. Under side of body and base of wings a distinct wash of yellow - - - - - P. Egeremet.
dd. Body beneath gray, no yellow wash - - P. Verna.
cc. Spots only on the under side of fore wings - P. Manataaqua.
bb. Fore wings without subterminal row of spots - - P. Metacomet.

NOTE.—P. Pontiac and P. Bimacula may occasionally be found in the State. I have not included them in the table because I could not obtain specimens from which to make description. P. Vitellius is reported from Iowa, but I do not know of it being found in Illinois.

32. *Amblyscirtes.*

Terminal joint of palpi a little prominent; thorax and femora roughly hairy; middle tibiae spined; abdomen thin, scarcely reaching the anal angle of hind wings, color dark brown or black, subterminal row of yellow spots on both sides of both wings, somewhat indistinct above on hind wings - - - - - - - - - - A. Samoset.

NOTE.—Possibly A. Vialis should be included.

33. *Pyrgus.*

Brush of hairs at base of antennae longer than half the diameter of the eyes, palpi surpassing the front by more than the length of the eyes, tibiae without spines, color black, tessellated with white spots of which those in the center of the wings form a more or less complete band - - P. Tessellata.

34. *Thanaos.*

Knob of antennae spindle shaped, semilunarly curved; brush at base of antennae longer than half the diameter of the eyes; last joint of palpi thick, bluntly conic, nearly covered by the bristles of the second joint, gray below; abdomen as long as the head and thorax. General color black or dark brown.

a. Fore wings without subterminal row of transparent spots, on the under side two rows of white spots near the outer end of both wings.
 b. Two rows of large dark spots crossing the middle and outer third of fore wings, each spot washed with white, terminal row of small dots indistinct - - - - - T. Brizo.
 bb. Irregular row of large blotches, washed with white, through the middle of the wing; three rows of small, distinct spots outside of this - - - - - - - - T. Icelus.
aa. Fore wings with a subterminal row of five transparent spots, four near the costa and one near the middle; a sixth in the discal cell.
 b. Subterminal row of dark spots triangular.
 c. Spots in the terminal row about one-third the size of those in the subterminal row.
 d. Color rather light brown - - - - - T. Lucilius.
 dd. Color almost black, the fore wings considerably washed with white scales - - - - - T. Persius.
 cc. Spots in the terminal row about one-fourth the size of those in the terminal row, color clear brown, spots towards the base irregular but distinct - - - T. Martialis.
 bb. Subterminal row of spots with the angles rounded so that they appear ovate instead of triangular, dull dark brown, spots towards the base indistinct. - - - T. Juvenalis.

35. *Pholisora.*

Similar to Thanaos; last joint of palpi more prominent, snowy white below, abdomen longer than the head and thorax. Black with a row of white dots near apex of fore wings; size small.

a. Hind wings entire - - - - - - - P. Catullus.
aa. Hind wings dentate - - - - - - P. Hayhurstii.

36. *Eudamus.*

Antennae a little longer than half the costa of fore wings; knob very slender, spindle shaped, bent beyond the middle and extended to a long fine point; brush at base one fourth as long as the diameter of the eyes; abdomen not reaching the anal angle of hind wings, color brown black.

a. Fore wings with two short rows of contiguous dots extending back from the costa in its middle and outer third.
 b. About two very small dots behind the outer row - E. Pylades.
 bb. Three distinct dots in a triangle behind the outer row - - - E. Bathyllus.
aa. A yellow band through the middle of the fore wings,
 b. Hind wings with a broad white border beneath, more intense at the anal angle - - - - - - - E. Lycidas.
 bb. Hind wings with a broad silvery band through the middle of the under side. - - - - - - - E. Tityrus.

In the arrangement of the above tables I have followed Edwards' Catalogue of the Diurnal Lepidoptera. Even in one or two instances where more recent opinions make species varieties of other species, I have followed the catalogue, but in the case of the variety Egeremet of Pamphila Otho, I have deviated from this plan, giving it the rank of a species, partly from my own observation and partly from a note from Mr. W. H. Edwards, in which he says it is doubtless a good species.

With this I have the honor to be very truly yours,

GEO. H. FRENCH, Curator.

Military Science and Tactics.

ROBT. ALLYN, LL.D., *Principal Southern Illinois Normal University.*

DEAR SIR:—I have the honor respectfully to report in reference to my department as follows:

Upon entering upon my duties, having the apparent prospect of opportunity to form a battalion at an early day, I deemed it best to effect at once, in the case of officers, such organization.

Professor James H. Brownlee was selected for and cheerfully accepted the Adjutantcy.

From the beginning the command habitually assembled as in company formation for drills and, after roll calls, were divided into squads and placed under my own charge and that of selected cadets who imparted only such instruction as they had previously accurately learned and executed under my personal direction. By frequently reminding the corps that there were many steps from these elementary lessons before they would be able understandingly to enter upon the "School of the Battalion" and yet—later on—by giving them an idea of the formation through formal assembling and the publication of general instruction or information in general orders by the Adjutant, I believe ambition to progress rapidly, and early learn what was beyond, was very generally inspired, and, as a result, before the end of the first University term I had the pleasure to command them through a two hours exhibition, infantry drill, in company movements, before a committee of the leading citizens of Carbondale, which throughout was most excellent. In this connection I respectfully submit herewith a copy of the resolutions referring to the same, passed unanimously by said committee, a majority of whom were efficient officers of volunteers during the War of the Rebellion. After considerable delay and negotiation a neat and soldierly uniform, consisting of a cap, sack coat and pants of cadet gray, similar to the West Point "undress," was obtained, made to measure, for the very low price of $12.50 per suit and was adopted. By removing the buttons it becomes a tidy citizens suit of military cut. The West Point system of gold chevrons to designate cadet officers has been adopted.

With the beginning of the second term two companies were organized and a rule was made requiring cadets of the first term to alternate in drilling parts of their respective companies in the school of the soldier whereby they learned how to correctly impart what had been previously taught them. A part of each drill hour was thus applied and during the remainder I in person exercised them in company movements.

During this term gun detachments were formed and instruction in the "Manual of the Piece," with our three inch cannon was given.

During the spring term much attention was devoted to rifle practice firing with ball cartridges and when the general unfamiliarity with fire-arms at the start is considered the scores made by the cadets seem astonishing. I ascribe it largely to their skill acquired in manipulating their rifles in the bayonet exercise and their confidence acquired in previous blank cartridge practice firing. Throughout the year, and interspersing the drills at suitable interims, addresses on army organization, strategy, grand tactics, staff administration, and illustrative lectures on field signalling have been given. During the second term I also taught a class in constitutional and military law. The further details of the plan of instruction outlined in the University catalogue of last year will be developed in their proper sequence hereafter. Referring to the same I invite your attention to the accompanying letter from Gen. Wm. T. Sherman, commanding the United States army.

The armament of the military department consists of 200 cadet rifles, extra parts and necessary accoutrements complete, two 3-inch field artillery and caissons with required implements —and equipments—and before the opening of next year, we will be in receipt of 100 light cavalry sabres. Each year, for practice firing, the United States furnishes 100 artillery blank cartridges, 1000 infantry ball and 1000 infantry blank cartridges. We hope by next fall to be equipped with an outfit for field signalling. The Governor of Illinois having indicated that at the end of each year he would confer the complimentary rank of captain in the I. N. G. on the four cadets graded highest in the corps I have nominated for your approval the gentlemen I regard after careful consideration, entitled to that preferment.

I have the honor to subscribe myself very repectfully

Yours to command,

T. J. Spencer, U. S. A. Prof. Mil. Science and Tactics.

NORMAL CADETS

On the occasion of the public parade of the cadets of the Southern Illinois Normal University, on Saturday November 9, A. D. 1878, Col. D. H. Brush, chairman of the local board of visitors, on motion of W. H. Woodward, appointed a committee of three for the purpose of expressing the views of said local board as to the merits of the drill of said battalion, which is as follows:

Resolved, That we, the local board of visitors of the cadets of the Southern Illinois Normal University, have witnessed with great pleas-

ure the parade and drill of said battalion, on Saturday, November 9th, 1878, in the city of Carbondale, Illinois. We are gratified in being able to say that said parade and drill much more than met the expectation of this board, and as we believe, that of the most ardent friends of said battalion. It was in every way complimentary to the officers and members of said battalion, and especially so to Capt. Spencer, the worthy instructor in military tactics in said university. When the time said battalion has been organized is taken into consideration (only seven weeks) connected with the perfect movements and soldierly bearing of officers and men, we can truly say it was much beyond our expectation, and, as we believe, a surprise to every one.

W. H Woodward,
E. J. Ingersoll,
F. A. Prickett. } Committee.

Washington, D. C., October 17, 1878.

CAPT. THOS. J. SPENCER, U. S. A., *Instructor Military Science, Southern Illinois Normal University, Carbondale, Illinois.*

Captain:—I am directed by General Sherman to reply to your communication of the 15th September, embodying your plan of military instruction at Southern Illinois Normal University, and inform you that he considers your programme a most excellent one, and hopes you may have the necessary assistance to carry it out in all its details.

I am very respectfully,

A. McD. McCook,
Colonel and A. D. C.
In charge of subject on Education in the Army.

SIXTH

ANNUAL REPORT

OF THE

PRINCIPAL

OF THE

Southern Illinois Normal University,

WITH THE

Accompanying Reports of the Several Professors.

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REPORT OF PRINCIPAL.

To the Trustees of the
Southern Illinois University:

GENTLEMEN:

The term now closing completes the sixth year of the history of our University. The Giver of all mercies has bestowed with abundance his blessings upon us. The several members of the Faculty and the students generally have enjoyed excellent health during the year, though two of the families of the faculty have suffered irreparable losses, and one of the students died during the year.

In the aggregate number of students there has been a falling off, as compared with the last year, but the scholarship and permanent attendance have both advanced. In accuracy of learning, in diligence of study, and in obedient deportment, our pupils have deserved great praise. Some have indeed failed to improve their privileges and a few have been disposed to acts of indiscretion, and as a consequence some have been advised to accommodate us with the pleasure of their absence hereafter. Yet on the whole better work has been done and with less friction than in any year before.

Two things are to be especially noted, the large attendance of the children of farmers and laboring men, and the number who engage in teaching, during their course of study in the University. The records we have kept with much labor the occupations of parents, ages, and places of teaching after attending our school. While this has been a work of great care and labor it has been a source of satisfaction to us and has suggested many ideas valuable to the public.

Thirteen hundred and four students have been enrolled and studied for longer or shorter terms. The occupations of the fathers of these were as follows: Farmers, 721; Merchants, 167; Physicians, 88; Ministers, 42; Carpenters, 36; Agents, 32; Lawyers, 31; Teachers, 29; Millers, 25; Machanics, 16; Laborers, 15; Druggists, 10; Civil Officers, 8; Shoemakers, 7; Hotel Keepers, 7; Blacksmiths, 6; Livery Stablekeepers 5; Bankers, 5; Editors, 4; Jewellers, 4; Cabinet makers, 4; Telegraph-

C 2129

ers, 4; Miners, 5; Tinsmiths, 3; Contractors, 2; Saddlers, 2; Manufacturers, 2; Painters, 2; Masons, 2; Clerks, 2; Surveyors, 2; Book Keepers, 2; Tailors, 2; Upholsterers, 2; Engineers, 2; Tobacconist, 1; Grocer, 1; Photographer, 1; Butcher, 1; Military Officer, 1; in all 1304.

The teachers record is even more gratifying; for we find that of these 1304 students 223 have been in our school the past term. More than 550 have paid tuition as the organic act permits, and have given no pledge to teach. Add these now in school to this number making 773, and subtract from 1304, and we have less than 531 who have received instruction under a promise to pay the State for it in services at a much higher rate than our trustees have charged.

But of these 19 are known to have died—a very small proportion.—Now we have authentic information concerning 682 who have taught our public schools; and without doubt there are some who have taught who have neglected to report themselves. We think such a statement is a proper refutation by the logic of facts to the oft-repeated assertion, that students educated in Normal schools do not fulfill their obligations voluntarily taken to teach if situations can be found with reasonable effort.

This is, however, not the most formidable objection made and repeated against Normal Schools. It is said in the first place that the course of study is not practical; and in the second place that it is not necessary for a teacher to be trained at all; indeed young persons taught in our common schools make better teachers, than those taught in Normal schools. It should be fully understood by this time at least and in this country that nothing so prepares for a specific work as honest labor in that work. It is this which made the old time apprenticeships so valuable in the trades as they are called, and then are still and undoubtedly will always be substantially insisted on as qualifications for business. A young man or young woman can never become a good teacher by simple study in school; and there may be a limit beyond which the pursuit of book learning alone will render the person timid and hesitating, or, on the contrary, will make him pedantic, or opinionated, theoretical and practically useless. No one pretends to deny that an education in a cloister unfits for public or practical business. A vast amount of speculative learning may render a man unwieldly in the ordinary duties of life, just as too much iron armor may render a ship of war clumsy and valueless. But how is a theory of any labor to be constructed which does not take into account that there is need of system and science in the minutest details, and a necessity for skilled labor in all professions and in all callings. As the work to be done increases in complexity and importance to the community so does a thorough knowledge of its laws increase. If it be said that genius will supply by a sort of instinct all the necessary tact to secure success as well as the knowledge of details required, the reply is very simple; there are not twenty thousand young men and young wo-

men of genius for the work of teaching in the State of Illinois. Nature has not supplied that number, and if she had done it, another answer is forcibly true, the plain commonsense workers can be taught by study and information to do better work than a genius can. The State has so hemmed in the teacher's calling by its restrictions of qualifications, reports, keeping of records, use of prescribed text books, and, in some measure methods of instruction as to hamper genius completely. Why has the public opinion justified these rules and restrictions and prescriptions? Because the men who have opened the work of schools have seen that they are a necessity. So many of the candidates for the teacher's place and profession have been found wanting in learning or in enthusiasm or in perseverance or in other essentials, that it has been decided almost unanimously to declare by law what teachers must know before hand, what they must do, and in some cases what they must not do. And in this way our school system has been growing into a very complicated affair, and it now demands many and varied qualifications in addition to genius to carry it forward. Two ways are open. The one to employ eminently skilled men to be overseers or superintendents, and less qualified persons to teach under them. The other to demand of all who enter certain qualifications antecedant and allow far more freedom to individual genius in the daily work of teaching. The superintendent's method would give to the common schools of a county one man or woman of superior ability and a hundred hired for simple cheapness and because they could blindly follow directions. The other will give to every rural district as well as to the high schools, teachers of considerable culture, of good character, and often of large enthusiasm and experience. When this latter idea, which is the plan largely adopted, is properly supplemented by thorough preparation in learning as the Normal school established by the State, proposes, it is seen at once how eminently reasonable is the system of the Normal. It diffuses the education best fitted to make teachers which the wisdom of practice has collected, and follows and enforces the system of examination, diligence and daily patience which the Legislator has found to be a necessity and has embodied in the law and commanded the citizens to enforce. The Normal School carries into a hundred remote districts the knowledge of the best methods of study and of communicating, and very much of information acquired at our school. But better than this it has brought together those who are to teach and has given to them acquaintance with others, and inspired them with a noble idea of the elevation of their work, and has made them far more enthusiastic in their duties.

But there is no occasion to urge this matter further. We have had additional reasons to know that our students are highly appreciated, in the fact that applications almost double any previous year have been made to us for teachers in the higher class of public schools. And we

rejoice to know that in most cases those whom we have recommended have given such proofs of ability to teach and govern as have become the best testimonials to the value and even the necessity of our school.

In conclusion I am happy to report the general faithfulness and efficiency of the several teachers. All have labored with great zeal and their success has been such that each one has justly merited and I believe enjoys, the confidence of the pupils under his care. I will not now particularize. They have all made reports of their departments which are herewith submitted.

The financial statement herewith transmitted shows very large items for Repairs and for Incidentals. The first has been owing to the work done on the roof and cornice. These were when built in many respects defective and can only be completely put in good condition by removing the sham iron cornice and substituting for it a stone or wooden structure. The stone would cost very largely. The wood is far preferable to what we now have in all respects save one—danger of fire. The work I think has been well repaired and will stand for several years. One thing may be said that from January till the storm of May 20 inst., we had no leaks from the roof or upper windows—a state of affairs very pleasant and never before known in our history.

Additions have been made to the Museum by some purchases and more by collections. These have now almost reached an amount which fills the room and will soon make it necessary to enlarge the cases and facilities for preserving the specimens. The library has been so far increased as to occupy nearly all the shelving and is becoming very useful to the students and faculty and to those who are making scientific researches.

Allow me to repeat, the year has been one of great labor on the part of the faculty and we think of earnest and careful study on the part of the students, and the signs of progress have seemed to multiply.

The faculty unanimously recommend the following students who have successfully completed the course of study prescribed by your By-Laws as proper and worthy candidates to receive diplomas, viz:

FOR DIPLOMAS IN CLASSICAL COURSE.	IN ENGLISH COURSE.
Henry A. Kimmell.	Lauren L. Bruck.
Wallace E. Mann.	Joseph Gray.
Albert B. Ogle.	Louis Heitman.
Frank P. Rentchler.	Lizzie M. Sheppard.
Charles E. Hull.	Gertrude A Warder.

I remain very obediently your servant,

May 26, 1880. ROBERT ALLYN, Principal.

Department of Latin and Greek.

ROBT. ALLYN, LL. D., *Principal Southern Illinois Normal University.*

DEAR SIR:—I have the honor to present herewith a summary of the classes and work in my department for the scholastic year 1879—80.

In the fall term the classes under my charge were as follows: Greek Rudiments—five members; Latin Elements, Section A.—nine members; Anabasis and Greek Grammar,—three members; the Aeneid of Virgil and Latin Grammar,—nine members; Caesar's Commentaries on the Gallic war, and Latin Grammar,—fourteen members; Latin Elements, Section B.—eighteen members.

In the Winter Term the classes advanced to the following: the class in Anabasis advanced to Memorabilia of Socrates; the class in the Commentaries of Caesar, advanced to Sallust's Catiline; the students in Virgil read the Orations of Cicero; the two classes in Latin Elements advanced to reading in Roman History and Latin Grammar; and the classes in Greek Rudiments passed to exercises in reading Greek Fables, Anecdotes, Mythology, Jests, Legends &c.

During the third term and at this writing, my classes are pursuing the studies in Anabasis and Greek Grammar, Homer's Iliad, Sallust's Catiline and Latin Grammar, Roman History and Latin Grammar.

During all the year I have had charge of one division of Section E, in Orthography, composed of thirty-two members.

It will appear from the above that there have been nineteen classes in this department during this scholastic year, comprising in the aggregate one hundred and ninety-six members. It gives me pleasure to state that the students have very generally evinced a commendable zeal and an earnest desire to progress in their studies. A few from irregular attendance and want of application, will fail to carry their work. The grades in most cases, from daily recitations and written examinations have been good. Some have been called home, and thus they have very materially interfered with the amount and progress of their class work.

The classical course embraces three years of the Latin and two years of the Greek. Five students will very honorably complete the full classical course, and three, will in like manner, finish the Latin.

The study of the Latin and the Greek is designed to aid in the preparation of teachers for the High schools of the State. The English language is, as is well known, a mixed tongue, embracing words from all the principal languages of the world. The Latin and Greek elements in our language are so numerous that they form the basis of not less than fifty thousand derivative words. They are so generally interwoven with the composition and etymology of English roots that a knowledge of them is absolutely indispensible to a thorough understanding of our own vernacular. The teacher of the English language

who is familiar with the historic and philologic etymology of the Latin and Greek, is all the better qualified for efficient work.

The method of presenting the lesson at each recitation looks to the practical. Each lesson is examined as to its etymology and grammatical structure. The aim is to cultivate at the same time accuracy in memory and judgment; to reveal the intimate connection of the Ancient with our own language, and especially to render the student's knowledge of the English more thorough and satisfactory.

Added to my duties of the school and recitation room, I have per formed the labor of the Registrar of the Institution. I have carefully enrolled, in the aggregate, the names of seven hundred and eighty students, giving date of entrance, residence, parent's or guardian's name, date of birth, nativity, &c.; have collected all tuition and incidental fees, and have, on receipt, transferred the same to the Treasurer of the University; have prepared proper vouchers in duplicate, and have issued money orders for the payment of all bills of indebtedness, and have kept a faithful account of all amounts received and paid out; and have performed such other duties as pertain to the office of the Registrar.

Respectfully Submitted.

CHARLES W. JEROME.

IV Higher Mathematics and Practical Pedagogics.

ROBERT ALLYN, L.L.D., *Principal Southern Illinois Normal University.*

DEAR SIR:—The following is a summary of the work in my department for the year 1879—80.

FALL TERM.

Elementary Algebra, E, one classs	30	Members.
Higher Algebra, C, one class,	26	"
Elementary Geometry, B, one class,	18	"
Surveying, one class,	11	"
General Geometry, one class,	2	"
Practical Pedagogics, C, one class,	10	"

WINTER TERM.

Elementary Algebra, E, one class,	15	Members
Elementary Algebra, D, one class,	18	"
Higher Algebra, D, one class,	16	"
Elementary Geometry, A, one class,	12	"
Differential Calculus,	1	"
Practical Pedagogics, B, one class,	15	"

SPRING TERM.

Elementary Algebra, D, two classes,	16	Members
Higher Algebra, D, one class,	12	"
Trigonometry, one class,	11	"

Surveying, one class,	10	"
Integral Calculus,	1	"
Practical Pedagogics, A, one class,	20	"
School Law, one class,	21	"

Each of the classes in the foregoing statement continued one full term, except those in School Law, Trigonometry, and Surveying. The last two together made one class for one full term but reciting two hours each day, the labor of teaching them was quite equal to that for two classes and they have been so reported in the tabular statement.

To accommodate the pupils in the Elementary algebra, in the spring term, their books being different, two classes were carried on, one of which was quite successfully taught by Miss Mary Ida Buckley, who had completed our course in Higher Mathematics and Pedagogics.

The number of classes regularly required in the department of higher mathematics, each year, including the optional branches, is fifteen, and in practical pedagogics, three If necessary to the proper care of this number, the classes in elementary algebra may, with profit, be placed under pupils who have been trained in pedagogics and higher algebra, in our institution, subject to careful daily supervision.

The progress made by a large part of the students in algebra and the higher branches of mathematics has been quite satisfactory. A majority of those in the lower classes in algebra seem to require from one to three terms for the acquirement of good habits of study. Failure in the higher classes has usually resulted from the large number of studies pursued rather than from lack of effort.

The classes in Practical Pedagogics have done well. The time now given to that branch is sufficient to enable pupils to do easily and thoroughly all that is required of them in the study. The results for the year just closing are quite satisfactory.

At their meeting in September last, the Trustees entered into contract for new walks and required me to assume supervision of their construction. This I have done as fully as the care of a large number of classes, and a few other hindrances have permitted. A brief report of this part of my work has been submitted to the Board of Trustees.

In addition, the preparation for the planting of about two hundred and fifty trees was assigned to me and attended to in proper time.

Respectfully Submitted, JOHN HULL.

Department of Physics and Chemistry.

ROBERT ALLYN, L.L.D., *Principal Southern Illinois Normal University.*

DEAR SIR:—The following is my report for the school year just closed. The accompanying summary indicates the work done in classroom.

FALL TERM.	No. Pupils enrolled.	No. Pupils passed.
B, Natural Philosophy	18	16

A, Natural Philosophy	25	20
Rhetoric	20	17
Analytical Chemistry	—	—
WINTER TERM.		
B, Natural Philosophy	19	15
B, Chemistry	17	16
Logic	16	15
E, Grammar	24	18
SPRING TERM.		
Geology	17	17
A, Natural Philosophy	18	14
Analytical Chemistry (two hours)	11	11

Besides the work indicated above; the records of attendance and spelling of the entire school have been in my charge. I have served as monitor in Normal Hall one hour each day; also in charge a part of General Exercise hour. Some attention has been given to taxidermy and the museum.

It will be noticed that no class in Analytical Chemistry was formed in the Fall term. A small class could have been organized, but on account of the expense of keeping the laboratory open and in working order it was thought advisable to defer that work till the Spring term.

By referring to the catalogue it will be noticed that a change has been made, giving the work in chemistry twenty-five weeks instead of twenty-one, which will undoubtedly be of great advantage to the class. During the year a commendable zeal has been exhibited, especially in the classes in Chemistry and Geology. The new book introduced in the Analytical work, has partly served its purpose. The work in Geology has been supplemented by some practice in the determination of minerals, with results highly gratifying. Our aim is to make the work as practical as possible. Putting the student at work with the material itself seldom fails to interest. The maxims of Horace Mann are verified every day both in the laboratory and in the department of physics. "What is seen is best understood. What is understood interests. What interests is remembered."

The subjects taught in my department are so extensive and inexhaustable, and the apparatus manufactured so complete, there is a great temptation to have what others have. But in this line our claims have been moderate and the lesson of making the most of what is at hand is taught daily. In fact this lesson of improving illustrations out of a meager supply of apparatus is many times of more value than a brilliant display with an expensive outfit. Possibly in the way of economy too much care has been exercised. The design has been to make the student familiar with the common chemical processes, and a good manipulator of apparatus, thereby better fitting him for the work of a teacher. This can be done without going beyond our province as a Normal School. You will pardon me if advantage is taken of this oc-

casion to mention some of the needs of the department. In the line of physical apparatus we are comfortably supplied. However, there is a want in the laboratory for a case for the purpose of protecting the chemicals from exposure and dust. Also a suitable place for exhibiting specimens of applied chemistry, such as paper in its several stages of preparation; the number of fertilizers for different crops, and various varieties of coal and other mineral deposits. Especially in the work of mineralogy do we need not only the specimens for class work but also a place to keep them without carrying them to and from the museum; which is so far removed from our place of work as to make it difficult to have the specimens needed just at hand.

Again should attention be called to the fact that the entire school is annoyed and the workers in the laboratory seriously affected by having no good escape for the noxious gases formed.

As a sanitary measure would I urge that provision be made at once for the erection of a hovel, which can be placed in the laboratory in connection with an old flue used in the former method of heating the building. This can be done at comparatively little expense and will add much to the comfort of all and much to the interest of those who are obliged to remain several hours in very impure air.

I might further state that the subject of optics could be made without much expense, much more interesting could we have a darkened room. For some years room No. 12 was used for that purpose; but it proved to be inconvenient each term to put it in proper order. Although my own room is an east room it could be so arranged as to answer. Therefore we urge that suitable curtains and other appliances be furnished said room for this purpose.

The degree of success that has attended the department of physics and chemistry in the past, warrants the assurance, that with the former experience and added facilities better results may be expected in the future.

Respectfully submitted,

D. B. PARKINSON.

Department of Literature and Elocution, Vocal Music and Calisthenics.

ROBERT ALLYN L.L.D., *Principal Southern Illinois Normal University.*

DEAR SIR:—I herewith submit my report for the year 1879—80.

FALL TERM.

Elocution, two classes,	- -	Enrolled	39,	Dropped	9,	Passed 25
Reading A,	- - - - - -	"	30,	"	4,	" 18
Reading B,	- - - - - -	"	15,	"	3,	" 9
Reading C,	- - - - - -	"	14,	"	1,	" 8
Vocal Music	- - - -	"	50,	"	6,	" 24

WINTER TERM.

English Literature,	Enrolled	17,	Dropped	2,	Passed	14
Elocution,	"	21,	"	6,	"	14
Reading A,	"	27,	"	9,	"	12
Reading B,	"	13,	"	1,	"	12
Reading C,	"	15,	"	4,	"	11
Vocal Music	"	29,	"	3,	"	19

SPRING TERM.

English Literature	Enrolled	15,	Dropped	1,	Passed	13
Elocution	"	12,	"	3,	"	8
Reading A,	"	27,	"	5,	"	20
Reading B,	"	22,	"	7,	"	15
Vocal Music,	"	28,	"	5,	"	18

In addition to the work of instructing the above classes I have, during two terms, had charge of the Normal Hall one hour a day and have continued to conduct the calisthenic exercises. Further than this, I have given private drill and instruction in higher Elocution to our students so far as I have been able. Certainly not less than one hundred hours of time outside of school hours have been thus devoted to pupils preparing for exhibition, contest, and commencement. My time has been so fully occupied with the routine duties of class instruction that I have been compelled to do less of this special work, so valuable to the advanced student than was needed.

I submit for your consideration the opinion that arrangement should be made for the special drill in higher elocution and oratory, of the members of the Senior class.

ENGLISH LITERATURE.

The first five weeks of the first term in Literature was devoted to American Authors, and the remaining term and a half to English Authors. The text book in use is "Shaw's Revised Outlines" which gives excellent satisfaction. Especial attention has been bestowed upon the remarkable periods and upon the great authors, and time was found for the reading by teacher and pupils of copious extracts from the best authors, and was most profitably spent. By this means interest was awakened and maintained and the love for good literature fostered and increased. The pupils in this delightful branch of learning have worked intelligently and faithfully, and have made commendable progress.

ELOCUTION AND READING.

As these differ but in degree repetition is avoided and brevity attained by including them under one heading.

It is a matter of regret to have to say that many of those who under my tuition come not only with much to learn, but worse still, with much to unlearn. Bad habits have been formed which have to be eradicated. Tones, inflections, emphasis and manner, are unnatural while reading, and are in marked contrast to those used in unpremeditated conversation. Oral reading brings into exercise two sets of faculties, viz: The receptive, by means of which the author's exact meaning

is apprehended; and the expressive, through the agency of which the thoughts and feelings of the author are communicated to another. The chief reason why the majority of teachers fail in teaching the important art of reading is because they permit their pupils to attempt expressions of thoughts not clearly conceived by the mind. The receptive faculties must have been so trained on a selection, before the expressive are brought into exercise, that when the work of communicating thought, feeling and purpose to another mind, through the eye and ear, is begun the former may do their work unconsciously, and the whole soul be given to the latter. First understand, then express. It does by no means follow that one who can grasp intelligently the author's meaning can adequately express that to another. The agencies of expression—voice and action—may both be inadequate to the task. The ability to comprehend thoughts and feel emotion, and ability to adequately communicate them to another are different things. But it does follow that without a clear conception of that which is to be communicated, the most cultivated voice and expressive manner are vain.

Consideration has been given to respiration in so far as it related to speech. In giving to the class a clear idea of the organs and muscles of respiration and their action, the casts of the organs of breathing, voice and speech have found a great aid. Breathing exercises have been used to aid in the development of the chest. The tones of the voice have been made the subject of attention, and the five elements of a tone —quality, force, stress, pitch and quantity, have been separately considered, and their application in the communication of thought exemplified and practiced.

The good qualities of voices have been strengthened, the bad suppressed. All of the elements of delivery have received attention. The elementary sounds and the symbols representing them, with the diacritical marks, (Webster's system), syllables, words, phrases, clauses, sentences, paragraphs, etc; the pause, inflection, accent, emphasis, slur and cadence, all have been passed in review. Proper attitudes have been taught and insisted on and concert exercises in gesture have been given. Thorough attention has been bestowed upon the professional part of our work and the methods of teaching reading in primary grades, viz: The alphabetic, phonetic, word and sentence, have been exemplified and discussed.

I am glad to say that better work has been done than in any other year and the progress of those under my tuition has been, in the main, satisfactory.

VOCAL MUSIC.

This branch has been raised to the dignity of a regular study and one term is devoted to it. The classes have been large and interesting. I have been occasionally assisted in the work of instruction by Miss Sarah Saul and Mr. Rajams. It has been my constant endeavor to so

teach the art of singing that the pupil will not only be able to sing from the score himself, but will know how to instruct others.

PHYSICAL CULTURE.

The time allotted to the calisthenic exercises does not exceed fifteen minutes a day and the cadets are relieved from all participation in these exercises.

The students enter heartily into the various movements, and their beneficial effects upon carriage, form and health, are too marked to admit of question.

It may be well to add that during the past year I have attended five teachers institutes in counties of Southern Illinois, and given between fifteen and twenty public readings in various parts of the State.

Very Respectfully yours,

JAS. H. BROWNLEE.

Department of Physiology and History.

ROBERT ALLYN, L.L.D., *Principal Southern Illinois Normal University.*

DEAR SIR:—During the year the following classes were taught in this department:

FALL TERM.	
Ancient History	15 pupils
Physiology (Normal Course)	21 "
U. S. History, Class A,	7 "
U. S. History, Class B,	44 "
WINTER TERM.	
Modern History	12 pupils
Physiology, (Preparatory Course)	24 "
U. S. History, Class B,	43 "
U. S. History, Class C,	42 "
SPRING TERM.	
Physiology, (Normal Course)	21 pupils
Physiology, (Preparatory Course)	22 "
U. S. History, Class A,	10 "
U. S. History, Class B,	35 "
U. S. History, Class C,	27 "
Total	323 "

Distributed by branches:—

United States History	208 Pupils
Ancient History,	15 "
Modern History,	12 "
Physiology,	88 "
Total as before,	323 Pupils

During the past year, the classes in United States History have been unusually large and interesting.

The requirement that the study of Geography should keep pace with that of History has been constantly and rigidly observed and hence, the greatest attention has this year been paid to the drawing of sketch-maps (on both drawing-paper and blackboard) which would serve in any way to illustrate the campaign, and marches treated of in the text. With few exceptions all of these sketches were drawn by the pupils themselves. This constant attention on the part of the pupils to this work, I have found to be productive of very great good, serving as it does to impress on their minds, the location of every place mentioned in the text. And this by the law of the association of ideas more firmly fastening the events themselves on the memory.

Pupils have been required to commit to memory but few dates and these of the more prominent or important ones, but these with their corresponding events were expected to be thoroughly and accurately learned. It does seem to me that much precious time is often actually wasted in the attempt to commit to memory long lists of dates—time which might be devoted to better purposes but still generally some knowledge and in a few cases accurate knowledge of the location of an event in time is absolutely necessary to any one, who aspires to possess an ordinary understanding of what is taught in history and hence an attempt has been made in this department of occupying a middle ground. It is possible, I think to make judicious choice of fifty of the more prominent dates in the history of the United States, so disposed that they like mile-stones may serve to locate any event in time with sufficient accuracy, the pupil of course always knows between what two of these prominent dates such an event actually lies.

Students have been encouraged to seek outside the text book for many interesting facts not recorded therein and hence the many Encyclopedias, the larger works of Bancroft, Lossing, Barnes, &c., the special historical treatises of Draper, Greely and others which the large and excellent library of the University affords, have been dilligently and constantly sought into for answers to many curious and interesting questions, propounded from time to time to the classes. It is to be regretted that many of the writers of text-books on history in the effort to make cheap books, leave out of them the instructing stories and episodes which give such flavor and interest to the larger works. It is indeed in the nature of things not to be expected that students will even become interested in the dry statement of events, and in the long array of dates which make up the bulk of most of our text-books in history. If by any means, the teacher can succeed in infusing into these dry details, the life and spirit of passing events students will be as interested in the branch as in any other in the whole curriculum of studies.

The classes in General History have this year been somewhat smaller than they were during the previous year. This branch not being one of those required by persons seeking teachers' certificates, few beside

those intending to graduate enter these classes, and yet hardly anyone will deny that a knowledge of both Ancient and Modern History would be of very great value to the teacher. Miss Emma Talheimer speaking of the value of Ancient History says: "If we look familiarly into the daily life ofour fellow men thousands of years ago, it is to find them toiling at the same problems which perplex us; suffering the same conflict of passion and principle; failing it may be, for our warning, or winning for our encouragement; in any case reaching results which ought to prevent our repeating their mistakes. The national questions which fill our newspapers were discussed long ago in the Grove, the Agora and the Forum; the relative advantages of government by the many or by the few, were wrought out to a demonstration in the States and Colonies of Greece; and no man who can vote, no woman, whose influence may sway in the smallest degree, the destinies of our Republic, can afford to be ignorant of what has already been so wisely and fully accomplished."

In the classes in Anatomy and Physiology, the students have given this year very much attention to the dissection of animals. It needs not to be demonstrated that more can be learned of anatomy in a few minutes by the actual examinations of the organs themselves than by as many hours of the severest study of the descriptions and diagrams of text-books though as an aid to dissection, full and accurate description is not only important but necessary. Rabbits and other small animals, hearts, lungs, livers, kidneys, eyes and ears of sheep and oxen have been principally used. These have been given to the pupils themselves with directions as to what to find and how to find and the work so far has been productive of the very best results. Lately the dissection by the members of class of a few eyes of oxen and sheep with such accuracy that the delicate blood-vessels of both the Tunica vasculosa and of the Retina were disclosed to view elicited the most intense interest and it is likely that not one member of that class will ever forget what his own scalpel revealed to him.

For the primary classes excellent models of different portions of the human frame have been provided and have been in constant use throughout the year and these with three human skeletons, and parts and organs of the human body and of the lower animals, which have been collected and preserved in alcohol by Prof. G H. French, make it a comparatively easy thing to interest and instruct those desiring a knowledge of the human frame.

In addition to my regular work in the class-room, I have taught throughout the year (a few weeks excepted) a class in spelling, and have as formerly attended to the duties of Librarian, in which latter work I have been ably assisted by Mr. Charles Hull, one of this year's graduating class.

Respectfully Submitted,

GRANVILLE F. FOSTER.

Department of Arithmetic and Astronomy.

ROBERT ALLYN L.L.D., *Principal Southern Illinois Normal University.*

The following is a summary of the work in my department for the year 1879–80:

Number of classes,	17
Aggregate number of pupils in classes	464
First term,	161
Second term,	191
Third term,	121

About 75 per cent. were successful in their work. The character of the work is shown by the syllabus as published in the catalogue.

Besides the regular work in my department I have had charge of the spelling. In this work I have been ably assisted by Profs. Jerome, Parkinson, Foster, and Miss Candee, and a number of advanced Normal Students.

The whole work has been done in accordance with directions given by the principal. About one hundred words a week have been spelled. The lessons were all written. The words were not only required to be spelled correctly, but the true sound of each letter in the word was required to be learned, and the sound indicated by the use of Webster's Diacritical Works. Three sentences daily containing the words spelled were composed by the pupils.

Respectfully Submitted.

A. C. HILLMAN.

Department of Grammar and Book-keeping.

ROBERT ALLYN L.L.D., *Principal Southern Illinois Normal University.*

DEAR SIR;—The following is a summary of the work done in the department of Grammar and Book-Keeping, during the sixth year of our university:

FIRST TERM.

	Enrolled.	Passed.
Analysis,	19	15
B Grammar,	31	28
C Grammar, 1st Div.	30	27
C Grammar, 2nd Div.	23	20
A Book-Keeping	10	10
B Book-Keeping,	11	9
	124	109

SECOND TERM.

B Grammar, 1st Div.	Enrolled 27	Passed 22
B Grammar, 2nd Div.	" 20	" 18
C Grammar, 1st Diz.	" 24	" 18
C Grammar, 2nd Div.	" 21	" 18
A Book-Keeping,	" 9	" 8
B Book-Keeping,	" 13	" 13
	104.	92

THIRD TERM.

Analysis,	Enrolled	14	Passed	10
Grammar B, 1st Div.	"	24	"	15
Grammar B, 2nd Div.	"	20	"	10
Grammar C,	"	33	"	27
Grammar A,	"	15	"	12
Grammar D,	"	12	"	9
Book-Keeping,	"	13	"	8
		131		91
Total for the year,		369		292

From the above statement it will be seen that I have had six classes the first term, six the second term, and seven the third term, making in all nineteen classes. I have myself taught six hours each day of the first and third terms, and five during the last eight weeks of the second erm, as for that time Professor Parkinson relieved me of the division of Grammar C.

In A Book-Keeping Charles E. Hull did fine work the first term, and Joseph Gray in the B class of the same, as pupil assistants. H. W. Karraker did good work the second term in the same capacity in the Book-Keeping.

The third term E. L. Sprecher as pupil teacher of the D Grammar class. Having seven classes, I could not teach with him as I had done for those mentioned for the previous terms. I heard A grammar class three days each week, and spent the other two overseeing the work of Mr. Sprecher. He deserves commendation for his success.

Respectfully submitted,

M. Buck, Teacher.

Department of Geography and Elements of Language.

ROBERT ALLYN L.L.D., *Principal Southern Illinois Normal University.*

In the work of the department of Geography and Elements of Language assigned to me by the Trustees at their last meeting, my effort has been to awaken in the pupils under my care an intelligent interest in the studies they were pursuing.

By encouraging them to consult the various reference books provided for their use, and to bring to these classes information gathered in their reading, in addition to that afforded by the text-book, I have tried to aid them in forming habits of study and careful reading which will be of service to them throughout life.

In the Elements of Language I have endeavored not only to give the pupils a knowledge of the rules and principles of Etymology, but to make this practical in the correction of errors, in speaking and writing.

In the teacher's classes in Geo. by discussing the best methods of presenting different subjects, and by requiring the pupils frequently to conduct the recitation in their class, I have tried to aid in preparing them to become efficient and successful teachers.

I have spent in teaching six hours a day each term except the fall term. During that term the D class in Geography was taught by Mr. Philip Fager, who did very satisfactory work.

FALL TERM.

A Geography,	Enrolled 14,	Dropped 0,	Passed 10
B Geography,	" 26,	" 2,	" 15
C Geography,	" 24,	" 6,	" 18
D Geography,	" 20,	" 4,	" 12
D Grammar, two classes,	" 68,	" 31,	" 38

WINTER TERM.

A Geography,	" 9,	" 0,	" 8
B Geography,	" 25,	" 4,	" 15
C Geography,	" 34,	" 5,	" 20
D Geography,	" 10,	" 3,	" 9
D Grammar, two classes,	" 69,	" 12,	" 38

SPRING TERM.

A Geography,	" 21,	" 6,	" 13
B Geography,	" 22,	" 3,	" 17
C Geography,	" 21	" 9,	" 8
Physical Geography,	" 13,	" 0,	" 13
D Grammar,	" 27,	" 7,	" 13
	302	74	247

Respectfully Submitted,

ESSIE C. FINLEY.

Department of Drawing and Penmanship.

ROBERT ALLYN L.L.D., *Principal Southern Illinois Normal University.*

DEAR SIR:—I beg leave to submit the following report of the work of this department, under my charge for the school year of 1879—80.

	Drawing.	Penmanship.
First term,	54	112
Second term,	28	90
Third term,	37	100

The pupils in drawing have manifested a remarkable interest in their work, considering the fact that the Trustees of the Institution have seen fit to exclude from the course, all that was purely artistic and ornamental, the part more attractive to the student. My endeavor has been to instruct in a complete free-hand course of drawing, such as should be taught by the regular teacher, from the Primary to the High

School; such a knowledge of this branch as is demanded of the teachers of public schools in many parts of our State and will be required in Southern Illinois when her school system is better established.

Seven pupils have completed this course of work, as requested by the Art Schools of our land. By patient and persevering effort this may be accomplished in one school year. Besides this work some of them have enlarged specimens for the use of classes in Zoology.

In the department of penmanship there has been a very laudable ambition to improve and as a consequence marked advancement has been observed, though but three or four have reached a degree of excellence sufficient to excuse them from this daily practice.

Respectfully Submitted,

JENNIE CANDEE.

Department of Natural History.

ROBERT ALLYN, L.L.D., *Principal Southern Illinois Normal University.*

DEAR SIR:—I beg leave to submit the following as my report of work done in the department of Natural History, during the year now near its close:

I have had charge of the following classes in Natural History; first classes in botany and zoology during the special session consisting of most of those who were members of the institute. The plan of work in recitation was similar to that of the preceding year, topics being given one day to be recited the next. No special text-books were used though those in use in the regular classes were preferred. As usual no class record was kept of these classes, but at the close of the session several were examined upon the studies for grades and passed. In addition to the work done during the hour of recitation practical work was encouraged outside of the recitation hours and with good results. This consisted in collecting and preparing various kinds of specimens of natural history for the cabinet and also analyzing in both botany and zoology.

During the fall term I had the regular class in primary zoology and a special class in advanced botany, with results as follows:

Elementary Zoology,	-	Number 10,	Left class 1,	Passed 9	
Advanced Botany,	-	" 10,	" " 3,	" 7	

In botany, Wood's Class Book is still in use In zoology a little change has been made. Instead of using one book for both the elementary and advanced classes varying the work so as to adapt it as much as possible to the wants of the pupils, it was thought best to use two books, Tenny's small work—Natural History—was adopted for the elementary class; and Tenny's Principles of Zoology, a new work, for the advanced classes.

During the winter term I had only one class, Advanced Zoology. The number and condition of the class was as follows:

Advanced Zoology, - Number 26, Left class 0, Passed 26.

During the spring term I have had four classes, besides the two botany classes set down in the scheme of recitations for this term, I have also had two classes in zoology as follows:

Elementary Botany,	-	Number	30,	Left class	6,	Passed	24.	
Advanced Botany,	-	"	31	"	"	11,	"	20.
Elementary Zoology,	-	"	14,	"	"	3,	"	11
Advanced Zoology,	-	"	20,	"	"	6,	"	14

There is so much call during the spring term for classes in natural history by those who have been teaching during the winter that classes in zoology as well as botany seem almost a necessity though it may be just as well to keep our scheme of recitations the same as now and make these special classes when there is a demand for them.

The increasing museum makes it possible to make the work in this department more efficient in illustration. In botany fresh specimens were used when they could be obtained, at other times those in the herbarium were used both for illustration and analysis. Our facilities for analytical work in zoology are better this year than they were last as we have obtained a half dozen Jordan's Manual Vertebrates and the tables of butterflies in Illinois which formed part of my report on work done in the museum last year. To further increase our facilities in this direction I have prepared as part of my work done in the Museum this year tables of the first three families of moths—Sphingidæ, Zygænidæ and Bombycidae.

In addition to the regular class room work practical work has been encouraged during the year, as last year, and with good results. This has consisted, not so much this year, in collecting and putting up specimens, though some of that has been done, as it has in analyzing, learning to trace through the keys independent of a teacher. For this purpose fresh specimens were used in botany, but in zoology the duplicate specimens of birds, reptiles, fishes and insects of the museum were used.

Respectfully Submitted,

G. H. FRENCH.

Military Science and Tactics.

ROBERT ALLYN. L.L.D., *Principal Southern Illinois Normal University.*

SIR:—I have the honor respectfully to report that, for the collegiate year ending to-day the rolls of the cadet corps indicate that during the three terms one hundred and fifteen students have received instruction

in military science. The highest enrollment during any one month was eighty-six during October 1879.

The first term was devoted to drills in the school of the Soldier and Company by Cadet officers under my personal supervision and evolutions of the Battalion which I commanded assigning the effective force of the corps as three companies. In this organization at our annual public parade, inspection, review and exhibition drill the cadets acquitted themselves exceptionally well and called forth emphatic praise from experts present as witnesses. During the fall term four classes and during the winter term classes in military science made creditable progress notwithstanding the absence of any obligation by the rules of the school to reach any specified grade. In a series of bi-weekly lectures I compiled and epitomized a large amount of valuable information on the history of warfare, and military organization. Assuming man as a naturally aggressive being I traced the adoption and employment of accessory agent of offense and defense from the primitive sling, and club, the catapult, battering ram, &c., through all the stages of invention and improvement up to the present patterns of ordnance and small arms and the present methods of fortifying, laying and resisting seige. Hand in hand with this were given drills and lectures in field signalling and a description of the methods employed in various stages of the world's history for communication between the main army and detachments. Had it been made obligatory by the regulations of the University for cadets to take copious notes and be subjected "quizzing" for the establishment of a satisfactory grade the value of these lectures to them would have been manifold greater by compelling attention to matters that could not but have greatly benefitted them. I respectfully suggest in this connection that the time given by the cadets to military instruction be made to count in the permanent records of the school for or against them, according to their merits, as in the case of other branches. Thereby the most and least worthy will be in a position to realize their respective values from actual records which will also be a source of desirable information to their friends.

In conclusion I earnestly recommend that suitable shelter be provided for the two sections of artillery in use by the corps.

I have the honor to subscribe myself very respectfully,

Your Obedient Servant,

THO'S J. SPENCER, Capt. U. S. A. Prof. Mil. Science &c.

Report of the Curator of the Museum.

ROBT. ALLYN, LL. D., *Principal Southern Illinois Normal University.*

DEAR SIR:—I beg leave to submit the following as my report upon the work done in the Museum during the year now nearly closed.

BOTANY.

Near the close of last year I had received quite a large number of plants in exchange for those collected here and sent out. I have not collected so much in this department of natural history this year though this has not been neglected. Instead of collecting and making extensive exchanges as last year, I have spent the time set apart for botanical work in mounting the plants already received. I do not know just what number of the 2,000 species I reported last year as having, are now mounted and in the boxes, but know it is the greater part of them. Miss Jennie Clay, one of the students, has assisted me in this work by gumming some of the labels and plants to the papers. I have already made arrangements for further exchange next fall with one man for Northern Illinois and Vermont plants, and expect to make others.

CONCHOLOGY.

Besides plants mounted I have procured cards suitable and mounted about half, I should judge, of the shells belonging to the Museum. These are at present placed in some of the drawers of the insect cabinet where they can be kept very well till the space is wanted for insects, or the quantity mounted becomes so large that the surplus drawers will not hold them. Some suitable cabinet for the shells will be a necessity before long. As a means of increasing a cabinet of choncology, I have had a little correspondence with a conchologist in California to exchange some of our duplicate insects for shells. I think by thus using our duplicates of insects and plants a fine cabinet of shells may be obtained at about the expense of transportation.

ALCOHOL SPECIMENS.

In this department something is being done all the while as new specimens of some kind to be thus preserved are received every few days, and as fast as received they are labeled and put in place. Prof. Forbes of the State Museum of Natural History has promised us a set of the fishes of Illinois which will probably be received some time next fall. We have also here several kinds of California fruit, in alcohol, brought by Prof. Parkinson on his return last summer.

BIRDS.

A few birds have been put up from time to time all through the year, both for the sake of specimens for the Museum and for the purpose of teaching taxidermy to such of the students in natural history as desired instruction in it. Besides the work done by myself Prof. Par-

kinson has done some work of this kind. When the glass cases that occupy the floor of part of the room were made it was contemplated putting an addition on top of the central one. During the past year this has been done making a case of three shelves with glass doors and ends. The upper one of these shelves is to be used for birds and the other for minerals, many of both of which are already in place.

MINERALS AND FOSSILS.

Prof. Parkinson has during the last year taken charge of and arranged the minerals that have been received during the year, as well as made such changes as he thought best, with those on hand before. On this account I can not report in detail on all that has been done in these but will merely say that the finest part of the collection is the set of minerals brought by yourself from the Lake Superior Copper regions last summer.

Not a great deal has been done in fossils during the year. A few have been added to the collection from time to time. All the larger specimens can be conveniently arranged on shelves or the bottom of cases, but some more convenient method for arranging the small ones needs to be devised than the one now in use. Perhaps as good a method as any will be to place them in pasteboard boxes, with the labels, when they can be arranged in the case now containing them.

CONTRIBUTION.

I would take this opportunity to acknowledged our indebtedness to the following persons for the things placed after their names, received during the year. It is possible some have been overlooked in this enumeration, especially may this be the case with minerals, but our friends I hope, will understand that we are thankful for the specimens, and that the oversight was not intentional. We hope that our friends who may have or may find curiosities or other things valuable to the museum will continue to help us to make our collection a fit representative of the natural history, archeology, etc., of Southern Illinois.

Dr. Allyn, Plants from Lake Michigan, Minerals from copper region of Lake Superior, Reindeer Moss from Lake Superior, Rhinoceros Beetle, Black Rat (mounted), Silk wound from secretion of Maple Louse (Lecanium Acericola), Indian Mound relics, Sea Beans and large Marine Shells from Gulf of Mexico.

Miss Lula Haskell, Polyphemus Moth.

R. Tierney, Smerinthus Juglandis, Nerice Bidentata, 2 Calocalae, Luna larvae, several species of beetles, Imperial Moth larva, Myrmelion Obsoletus, Nephelodes Violans, 2 Sparrow Hawks, Junonia Lavinia, Plusia Precationis, and many others.

S. E. Harwpod, Water Adder, Worm Snake, Common Garter Snake, Say's Garter Snake, Red Evet.

Prof. A. C. Hillman, Danias larvae.

Thomas E North, Incrustations from Hot Springs, Ark.

J. P. Jones, Sumner, Ill., Head of Tautog.
Willie Bryden, Garter Snake.
Dora Lipe, Fort Smith, Ark., Buffalo Clover, a Horse Tail Rush, Water Violet.
John Marten, Asplenium Pinnatifidum, Dryocampa larvae, Smerinthus larvae, Gaura Coccinea, Spiranthes Latifolia, etc.
Katie McCarthy, Rhinoceros Beetle.
Wm. Gearing, Sumner, Ill , Little Brown Bat.
A. W. Barber, Yankton, D. T., 41 specimens of shells.
C. Lawrence, Royal Walnut Moth larva.
W. P. Robinson, " " "
C. Sheppard, " " "
S. E. North, " " "
John Sorrell, Makanda, Ill., White Heron.
James Anderson, Larvae of Io moth and Hand Maid moth.
Matilda Bird, larvae of Asterias butterfly.
R. G. Sylvester, Ground Snake, Pithecium chrysalis, Calamite, Cecropia cocoon.
D. B. Fager, Catocala Nebulusa, Large Spotted Salamander, Cecropia cocoon, etc.
Mrs. J. Robertson, Large Staghorn Beetle.
James Robarts, M. D., Blowing Viper, fossils, Caesonia butterfly, etc.
Mrs. E. Robertson, Sphinx, and Antiopa larvae.
Lou Sheppard, Five-Spotted Sphinx.
C. Bernreuter, Nashville, Ill., Indian Pipe plant.
Dallas Meisenheimer, " "
Salla G, Booth, Sparta, Ill., " "
S. Hewitt, White Line Sphinx, Myops Sphinx.
Mrs. Kirkpatrick, Murphysboro, Ill., Sturgeon plates.
Jennie B. Morrison, Odin, Ill., Empretia larva.
George Brush, larvae of Asterias butterfly and several others.
R. J. Fahs, Jerseyville, Ill., box of woods, minerals and fossils.
Edwin Foster, Tityrus larvae.
Mrs. A. B. Parmlee, Grand Tower, Ill., larva of Amyntor Sphinx, Zebra Pampas Grass.
Dean Cline, Arctia Rectilinea, Gryllus Abbreviatus.
Lillian Mitchell, a large spider.
A. B. Parmlee, White-Line Sphinx larva.
E. H. French, Summit Station, N. Y., Pickering's Tree Toad.
J. K. Miller, Sparta, Ill., Pearl Millet, Garter Snake.
Donaldson & Crowell, Double Crested Cormorant.
Mrs. Wm A. Perce, Mocking Bird.
Wm. A. Perce, several Clytus Caprae, Polyphemus cocoon.
Adella Easley, Plainview, Ill , Crawfish.
Henry Ingersoll, Indian arrow-head.

Jennie Candee, Hair from the head of Miss Jane McCrea.

John Poindexter and Benj. Brown, Royal Walnut Moth larvae in alcohol.

J. M. Mercer, Lincoln Green, Ill., Indian Chunkey Stone.

E. S. Glascock, Punk from hickory.

W. R. Head, Chicago, Ill., Sparifer Keokukii, Calymene Blumenbackii and other fossils.

A. B. Ogle, Belleville, Ill., Polyphemus cocoon.

Sara Saul, Chester, Ill., Selaginella Caesium, Eragrostes Capillaries, Cecropia cocoon, Luna Moth, etc.

S. North, Jr., Cecropia cocoon.

E. Sweep, Chicago, Ill., Minerals from Roche Clare.

E. J. Ingersoll, Indian Hide Scraper.

George Ennison, Meadow Lark, Tent Caterpillers.

Augustus Caine, Cecropia cocoon.

Benjamin Laughlin, " "

S. Smith, Garter Snake.

Robert Nairn, Marissa, Ill., Blow Snake.

Rev. E. Palmer, Leeches.

Prof. Cyrus Thomas, additions to the drawers in the insect cabinet of such orthoptera as he had to make our list more complete, also Mygale Spider.

Prof. D. B. Parkinson, a number of kinds of fruit, sea shells, Usnea moss, botanical and other specimens from California, also a Blue Tailed Lizard with the tail double.

S. C. Bond, Grand Tower, Ill., fossils from Chester.

—— —— ———— Large horn of an old buffalo from Kansas, donor unknown.

B. H. H., three specimens of wood from Jersey co.

INSECTS.

Collections of our local insects were made during the year in all the orders but more largely perhaps in the Lepidoptera. Large exchanges have been made with the duplicates of that order with Herman Strecker, of Reading, Pa., Adolph Conradi, Bethlehem, Pa., and J. Elwyn Bates, South Abington, Mass. The insects received from these parties were not alone insects from their localities but were from various parts of the United States as well as some from foreign countries. By these exchanges our collection in that order is about double what it was last year, and they are all but a few species in the families Pyralidae, Tortricidae and Tineidae named and arranged in the cabinet. Besides this I have named all but a few specimens of our collection of Coleoptera and have arranged and labelled all but a few species recently received, of our Orthoptera. John Marten, one of our students has taken up the study of the Diptera as a special study. During the winter term I worked with him one hour each day in naming the specimens in the cabinet belonging to that order, and he has done considera-

ble since beside some collecting so that more than half the species are now named. D B. Fager, another student, has taken the order Neuroptera to work up in a similar manner, though beginning this term not so much has been done as with the Diptera. Besides this work done by these two for the mutual benefit of themselves and assistance to the museum, Misses Jennie Clay, Sarah Saul and Sallie Paul have assisted me in both insect and plant work during the year.

As was anticipated last year the tables of butterflies of Illinois were of great benefit to us in the zoology classes, so much so that I feel justified in adding to the report this year tables of the first three families of moths of Illinois; Sphingidae, Zygaenidae and Bombycidae. In doing this I want no one into whose hands this report may come to consider this in any sense a list of the insects of these families belonging to the State but rather to consider that my object is to enable the student in the class room to identify such insects belonging to these families as may come before the class for illustration in this part of zoology. I doubt not there are a number of species to be found in the State not represented in these tables, as I had no lists to go to and not very much other means of knowing what there is here aside from my own observation and what I know to occur in the same latitude. For this reason the student may occasionally find a specimen he can not trace for want of representation in the key. On the other hand I may have introduced some that are not found in the State, being guided by latitude and in a few instances by the presence of food plant. The last may be the case with some of the species found more commonly in the Southern States.

Before concluding I want to take this opportunity to acknowledge, with thanks, assistance in my insect work during the year from Wm. H. Edwards, Coalburgh, W. Va., Herman Strecker, Reading, Pa., and A. R. Grote, Buffalo, N. Y.

In classification, I last year followed Edward's Catalogue of Diurnal Lepidoptera. In these tables I depart a little from the plan of most of our American systematizers, as in the first family, for instance, the genera are almost as numerous as the species and the characters of distinction too obscure for convenient class room use. For this reason I have grouped together many of these genera and taken such characters as my experience teaches me the student will most readily recognize. It is probable the tables would be better if I had united a few more genera, as for instance, Limacodes and its allies, and perhaps others. This plan was suggested to me by Herman Strecker, though I have not followed his arrangement in all its details.

NOTE.—To indicate size I use the same terms I did last year; smal those having an expanse of wing less than 1.25 inches; medium, from 1.25 inches to 2.25 inches; large, all above 2.25 inches. In the Sphingidae I have used the term moderate to designate those expanding about 2 inches.

ANALYTICAL TABLES
OF THE
MOTHS OF ILLINOIS.
Belonging to the Families, Sphingidae, Zygaenidae and Bombycidae.

† Antennæ filiform, terminating in a knob or club. BUTTERFLIES.

†† Antennæ variable, never terminating in a knob or club. MOTHS.

TABLE OF FAMILIES.

1. Bobdy stout, spindle shaped, or more slender in small species; head free, not sunk in thorax; antennae usually prismatic, thickened in the middle; wings narrow, hind wings much shorter than fore wings. Sphingidae A.

2. Size medium; head large, free; antennae simple or pectinate, slightly enlarged in the middle or towards the end. Zygaenidae B.

3. Body usually large, thick; head small and apparently sunken into the thorax; mouth parts usually small or obsolete; antennae pectinate or simple, placed higher on the head than usual. Bombycidae C.

4 Body thick, thorax and abdomen often with dorsal tufts, antennae simple or only slightly pectinate, wings folded like a flat roof over the body in repose. Noctuidae.

5. Body slender, scales fine; wings broad, thin, spread out in repose antennae pectinate or simple, palpi small. Phalaenidae.

6. Palpi in most species very long and compressed, wings deltoid in repose, or in some folded round the body. Pyralidae.

7. Size below the medium; palpi very short, beak like; fore wings oblong, crossed by bands that are often metalic. Tortricidae.

8. Size small, many minute; antennae long, filiform; wings pointed, heavily fringed on posterior margin. Tineidae.

9. Fore wings narrow, trifid or bifid, hind wings trifid. Petrophoridae.

NOTE.—Only the first three families are represented in the following tables of genera and species, but brief characters of the others are inserted that one using this may decide whether a given moth may be found in the tables or not.

Errata for Tables of Moths.

Page 26, line 11, for bobdy read body.
Page 26, line 12, for prismatic read prismatic.
Page 26, line 34, for Petrophoridae read Pterophoridae
Page 27, line 5, for tuft read tufted.
Page 27, line 35, for Sessia read Sesia.
Page 28, line 18, for Pinkish read pinkish.
Page 28, line 27, for Limacocles read Limacodes.
Page 31, line 36, for paint read faint.
Page 32, line 22, for gtay read gray.
Page 32, line 23, for Hylaens read Hylaeus.
Page 32, line 39, for palc read pale.
Page 34, line 2, for Deidamia read Deidamia.
Page 34, line 26, for Color read color.
Page 34, line 31, for Tennis read Tenuis.
Page 35, line 18, for Lybomorpha read Lycomorpha.
Page 35, line 44, for Fgrruginous read Ferruginosa.
Page 36, line 40, for Virginiea read Virginica.
Page 37, line 11, for Tessellata read Tessellaris.
Page 38, line 23, for Angelica read Angelica.
Page 40, line 19, for F. read T.
Page 40, line 26, for Polyphumus read Polyphemus.
Page 40, line 28, for anulate read annulate.
Page 45, line 44, for *Manestra* read *Mamestra*.

TABLE OF GENERA.

A. *GENERA OF SPHINGIDÆ*

A. Bodies robust.
 a. Outer margin of fore wings entire.
 b. Abdomen not tuft at tip.
 c. Color gray, sometimes tinged with brown. Sphinx, 1.
 cc. Color not gray.
 d. Ground color redish fawn or greenish.
 e. Dark brown or dark green triangular patch each side of thorax. Philampelus, 2.
 ee. No triangular patch on thorax. Darapsa, 3.
 dd. Ground color grayish yellow, hind wings black at base Choerocampa, 4.
 ddd. Ground color dark olive, light longitudinal stripe through the middle of fore wings, center of hind wings rose Deilephila, 5.
 bb. Abdomen tufted at tip, color dark brown. Ællopos. 12.
 aa. Outer margin of fore wings dentate or sinuate.
 b. Abdomen not tufted at the tip, Smerinthus. 6.
 bb. Abdomen tufted at the tip.
 c. Wings not transparent.
 d. Ground color of fore wings ashen, hind wings brownish red. Deidamia, 7.
 dd. Ground color of fore wings pale yellowish green, hind wings orange, Pterogon, 8.
 ddd. Ground color dark brown.
 e. Hind wings sulphur yellow at base and on the costa, Thyreus, 9.
 ee. Hind wings reddish on the costa, Amphion, 10.
 eee. Costa of hind wings the same color as the rest of wing. Enyo, 11.
 cc. Wings transparent, robust, Macroglossa, 13.
AA. Bodies slender, wings wholly or partly transparent.
 a. Hind legs densely hairy, Melittia, 14.
 aa. Hind legs not densely hairy, Sessia, 15.

B *GENERA OF ZYGAENIDÆ,*

A. Ground color black.
 a. Wings with light spots.
 b. Two white or yellow spots to each wing. Alypia, 16.
 bb. One white or yellow spot to each wing. Psycomorpha, 17.
 aa. Wings without spots, Ctenucha, 18.
AA. Color of base of wings yellow, outer borker black. Lycomorpha, 19.
AAA. Ground color white. Eudryas, 20.

C. *GENERA OF BOMBYCIDÆ,*

*. With wings.

A. Antennae simple, or at least only serrate.
 a. Body not pilose, the shoulder tufts distinct.
 b. Abdomen without dorsal or lateral row of spots.
 c. Hind wings red with outer border black.
 d. Fore wings red marked with black.
 e. Fore wings with two long and one short black line. Hyphoprepia, 21.
 ee. Center and outer end of fore wings black. Cisthene, 22
 d. Fore wings light ochre with white transverse bands containing black dots. Utetheisa, 24.
 cc. Hind wings not red.
 d. Color ochre, fore wings tawny. Crocota, 23.
 dd. Color yellowish white, or hind wings ochre with fore wings paler and marked with brown. Callimorpha, 25.
 bb. Abdomen ochre or pinkish with dorsal and lateral rows of black spots, or blue with yellow spots.
 c. Abdomen ochre or Pinkish. Arctia, 26.
 cc. Abdomen blue. Ecpantheria, 27.
 aa. Thorax at least, pilose so as to more or less obscure the shoulder tufts,—mostly females.
 b. Expanse of wings not more than 2.50 inches.
 c. Hind wings brown or brownish yellow.
 d. Fore wings brown, or yellowish brown, with,
 e. One or more green spots. Euclea, 33.
 ee. Posterior part yellowish, or with yellowish transverse line. Limacocles, 35.
 eee. Four transverse brown lines. Datana 42.
 eeee. Two transverse brown lines. Nadata, 43.
 dd. Fore wings dark ferruginous, two white spots near the apex. Empretia, 36.
 ddd. Fore wings green, outer margin and part of base brown. Parasa, 34.
 dddd. Fore wings bluish, marked with yellowish brown. Phobetron, 37.
 cc. Hind wings gray, or white with outer border dark gray.
 d. Hind wings more than two-thirds as long as fore wings, the latter rounded.
 e. General color of fore wings gray, with,
 f. Basal and central transverse brown lines. Gluphisia, 44.
 ff. Brown through the center, edged posteriorly with white, Nerice, 45.
 fff. White along the outer half of costa. Edema, 46.
 ee. General color of fore wings brown, gray along the costa. Coelodasys, 47.

dd. Hind wings about two-thirds as long as fore wings, the latter elongated at apex, general color gray.
Heterocampa, 48.

ccc. Hind wings, as well as fore wings, reddish ochre, or white and rose, Dryocampa, 50.

bb. Expanse from 2.75 to 5 inches.

c. Color yellow, marked with brown, Eacles, 51.

cc. Color, at least of fore wings, green, red along the veins, a few yellow spots. Citheronia, 52.

ccc. Color of fore wings brown with a purplish tint, large eye-spot on hind wings, Hyperchiria, 59.

AA. Antennae distinctly pectinate,

a. Pectinate to the tips.

b. Body not pilose, shoulder tufts distinct.

c. Abdomen with black dorsal stripe or row of black spots.

d. With black markings on the wings.

e. Hind wings white, reddish or ochre, at least two black spots near outer border. Arctia, 26.

ee. Hind wings white, not more than one black spot near outer border. Spilosoma, 28.

dd. No black on the wings, color gray, or yellowish white.
Euchaetes, 29.

cc. No black on the abdomen.

d. Wings not gray,

e. Pure white or with a few black points on fore wings.
Spilosoma, 28.

ee. Some shade of ochre, with lighter or darker markings on fore wings, Halesidota, 30.

dd. Fore wings at least gray,

c. Expanse about 1.25 inches, wings broad, Orgyia, 31.

ee. Expanse 2.50 inches or more, wings narrow,
Xyleutes, 61.

bb. Body pilose, shoulder tufts indistinct.

c. Size medium, expanse not above 2 inches.

d. Wings opaque, general color not gray,

e. Yellowish white, dark on basal half of fore wings.
Lagoa, 32

ee. Pale ash red with minute black points, an oblique fuscous line bent backward near the apex,
Perophora, 39.

eee. Brown or yellowish brown,

f. Expanse about 1 inch.

g. Hind wings yellow, or brown with golden luster,
Limacodes, 35.

gg. Hind wings brown, slightly reddish, fore wings with white or brown transverse lines, Cisseocampa, 53.

ff. Expanse from 1.50 to 2 inches.

g. Fore wings with 3 or 4 transverse brown lines, Datana, 42.

gg. Fore wings with 2 transverse brown lines, Nadata, 43.

dd. Wings opaque, general color gray.

e. Wings dentate, fore wings angled below the apex, Apatelodes, 40.

ee. Wings not dentate.

f. Hind wings more than two-thirds as long as fore wings the latter rounded.

g. Fore wings with base and central brown lines. Gluphisia, 44.

gg. Fore wings brown through the middle, edged posteriorly with white, Nerice, 45.

ggg. Fore wing with 3 transverse white lines and 2 brown shades. Ichthyura, 41.

gggg. Fore wings white along the outer half of costa. Edema, 46.

ggggg. Veins, outer margin, central shade and thorax white. Tolype, 54.

ff. Hind wings about two-thirds as long as fore wings, pale orange spots on fore wings and thorax, Cerura, 49.

ddd. Wings transparent, body black. Thyridopteryx, 38.

cc. Size large, expanse more than 2 inches.

d. With transparent eyespots near the middle of both wings.

e. Green, hind wings tailed, Actias, 55.

ee. Russety ochre or russety ferruginous, Telea, 56.

dd. Eye spots near the tips of the fore wings, spots in the center opaque.

e. Abdomen not ringed with red and white, Attacus, 57.

ee. Abdomen ringed with red and white, Samia, 58.

ddd. Hind wings with large eyespots in center, Hyperchiria, 59.

dddd. No eyespots, wings black with white band through the center containing black spots, Eucronia, 60.

aa. Antennae not pectinate to the tips, the apical half or third simple.

b. Size medium, expanse less than 2 inches.

c. Fore wings with green in the center, other parts brown.

d. One or more green spots, Euclea, 33.

dd. Whole middle of wing green from costa to posterior margin, Parasa, 34.

cc. Fore wings gray or grayish brown,

d. Light gray along the costa, Coelodasys, 47.

dd. Oblique light dash near the apex, or uniform gray. Heterocampa, 48.

ddd. Fore wings brownish ferruginous, or rose and white, often partly transparent, Dryocampa, 50.

bb. Size large, expanse more than 3 inches.

c. Yellow with brown markings. Eacles, 51.

cc. Green, red along the veins with a few yellow spots. Citheronia, 52.

**. Without wings, females.

A. Color gray, having rudiments of wings and weak legs, Orgyia, 31.

AA. Color yellowish, no rudiments of wings and without legs, Thyridopteryx, 38.

TABLE OF SPECIES.

SPHINGIDÆ.

1. *Sphinx.*

Size from very large to moderate; body long, tapering, not tufted at the end; wings entire; color gray, sometimes marked with brown, or tinged with yellowish brown.

A. Sides of abdomen with yellow spots, black between the segments.

a. Yellow spots large, hind wings with 5 transverse black lines.

b. Third and fourth lines from the base distinct. S. Celeus.

bb. Third and fourth lines, and often the first and second, blended a white spot at base of fore wings. S. Carolina.

aa. Yellow spots small, fore wings crossed by two broad light bands which unite behind. S. Rustica.

AA. Sides of abdomen black, light between the segments.

a. Hind wings with two distinct black lines.

b. Fore wings nearly uniform gray, containing 4 or more oblique black lines, the last reaching the apex, S. Chersis.

bb. Color more or less brownish gray,

c. First line from the base on hind wings paint, second broad and heavy, S. Luscitiosa.

cc. First line of hind wings distinct.

d. Fore wings light brownish gray, S. Kalmiae.

dd. Fore wings dark brownish gray, clearer through the middle from the base to apex, S. Gordius.

ddd. Dark brownish gray, paler along the costa, several black intervenular lines, line in middle of hind wings somewhat double, S. Amyntor.

aa. Hind wings evidently with two lines but these indistinct on account of the general black color.

b. Fore wings pale gray with white lunate stigma and oblique black mark from middle of costa to near the posterior angle, S. Jasminearum.

bb. Fore wings gray, no stigma, 6 black oblique marks. S. Plebeia.

bbb. Fore wings drab gray, crossed by 3 double lines of slightly darker shade, black subapical line, S. Catalpae.

aaa. Three black lines on hind wings.

b. Median line single.

c. Fore wings with distinct transverse lines, rather pale.

d. Transverse lines in two pairs, light and dark lines on hind wings distinct, S. Lugens.

dd. Transverse lines in three pairs, light and dark lines of hind wings rather indistinct, S. Undulosa.

cc. Fore wings without transverse lines but having black intervenular marks.

d. Expanse less than 3 inches, S. Eremitus.

dd. Expanse 3.50 inches, S. Plota.

bb. Median line appearing somewhat double, color dark brownish gray, fore wings with more or less distinct transverse lines of white spots. S. Hylaens.

aaaa. Hind wings black, without lines but lighter at the base.

b. Fore wings gray with distinct subterminal line from which two black dashes extend inward near the hind margin. S. Coniferarum.

bb. Fore wings pale gray with several black and brown transverse lines.

c. Rather dark, only a little of the base of hind wings pale, S. Harrisii.

cc. Light, space within subterminal line nearly white, nearly half of hind wings pale, S. Bombycoides.

NOTE:—Sphinx Celeus, is usually called S. Quinquemaculata, or by more modern scientists that and S. Carolina are placed in the genus Macrosila.

2. *Philampelus.*

Large insects shaped very much like Sphinx; antennae long, slender, tapering at the extremety into an ample hook with seta; color pale green or rosy fawn with large triangular dark patches each side of thorax and other dark patches on the wings.

a. Color rosy fawn P. Achemon.

aa. Color pale green P, Pandorus.

3 *Darapsa.*

Size moderate, body rather slender and tapering; head small, narrow, almost sessile; antennae slender, ample hook without seta; color of hind wings ferruginous.

a. Fore wings green, marked with lighter transverse lines and shades, D. Versicolor.

aa. Fore wings brownish red, marked with,

b. Transverse shades of olive green. D. Myron.

bb. Transverse shades of brown, D. Choerilus.

4. *Choerocampa.*

Size moderate, body long, tapering; antennae tapering suddenly in a short hook and seta; color of fore wings russet with longitudinal darker lines, hind wings black with submarginal row of yellow spots, C. Tersa.

5 *Deilephila.*

Body stout, thick; antennae somewhat clavate, terminating suddenly in a minute hook and seta; fore wings dark olive with longitudinal pale stripe, hind wings rose in center

a. Stripe of fore wings entire, D. Lineata.

aa. Stripe of fore wings sinuate, D. Gallii.

6. *Smerinthus.*

Size moderate or large; head small, sessile, eyes small, scarcely visible from above; outer margin of fore wings dentate or sinuate, hind margin excavated before posterior angle.

a. Hind wings without eyespots, general color pale dusky gray.

b. Nearly uniform gray with shades of darker, S. Juglandis.

bb. Basal third of fore wings pale gray, hind wings dusky rose with bluish gray anal patch preceeded by a black line. S. Modesta.

aa. Hind wings with eyespots, general color of fore wings brown or brownish.

b. Blue ocellus single.

c. General color of hind wings rose, S. Excaecatus.

cc. Ground color of hind wings yellow.

d. Base of fore wings brown, S. Myops.

dd. Base of fore wings yellow, blue patch along outer half of hind margin, S. Astylus.

bb. Blue ocellus double, fore wings gray with brown shades, hind wings rose, S. Geminatus.

7. *Deidamia.*

Size moderate; head small, sessile, abdomen slightly tufted at the tip; outer margin of fore wings angulated in middle, truncate at tip; general color of fore wings ashen, hind wings reddish brown, the first crossed by a number of brown bands. D. Inscripta.

8. *Pterogon.*

Size and body similar to Deidamia, general color of fore wings pale yellowish green with dark brown shades and marks, hind wings orange,
P. Gaurae.

9. *Thyreus.*

Body obtuse, broad and stout, abdomen a little more than one and a half times as long as the thorax, tufted at tip and sides; fore wings angled and dentate; color dark brownish gray, the anterior part and base of hind wings sulphur yellow, T. Abbotii.

10. *Amphion.*

Size below the moderate; body short, robust, large tufts at the end; head large, dark brown, fore wings dentate anterior part and base of hind wings brown shaded. A. Nessus.

11. *Enyo.*

Size moderate; body tapering, tufted; head large, eyes very prominent; fore wings dentate; dark brown with a grayish tinge, fore wings with a central light transverse line and a small brown ocellus,
E. Lugubris.

12. *Ellopos*

Size moderate; body not tapering, tufted, head broad; fore wings entire, dark brown, two faint light lines across the fore wings and one across the abdomen Æ. Titan.

13. *Macroglossa.*

Size not above moderate; body robust, short, tufted; head large, antennæ somewhat clavate, wings transparent, outer margin entire.

a. Ground Color brownish red. M. Thysbe.

aa. Ground color dark brown thorax yellow.

b. Dorsum of thorax brown. M. Diffinis.

bb. Dorsum of thorax olivaceous.

c. Inner edge of outer border of fore wings entire.
M. Tennis.

cc. Inner edge of outer border dentate. M. Axillaris.

14. *Melittia.*

Size small, body moderately robust, hind wings and base of fore wings transparent, hind legs thickly covered with hair which are red near the body and rest black; color black, wings golden black.
M. Cucurbitae.

15. *Sesia.*

Size from medium to small; body slender, black, often banded with light; hind wings, and often the fore wings, transparent.

a. Fore wings opaque. S. Exitiosa, female.

aa Fore wings transparent.

b. Opaque part of wings steel black, S. Exitiosa, male.

bb. Opaque part of wings yellow or yellowish black.

c. Abdominal tufts black, three yellow abdominal bands, the last at base of tufts, S. Tipuliformis.

cc. Abdominal tufts reddish orange, S. Acerni.

ZYGAENIDAE.

16. *Alypia.*

Size medium, black, shoulder coverts and two large spots in each fore wing pale yellow, two spots in each hind wing white, A. Octomaculata.

17. *Psychomorpha.*

Size small, black, one irregular lunate patch to each wing, those on the fore wings white, those on the hind wings orange, P. Epimenis.

18. *Ctenucha.*

Size medium; color black, the collar orange, abdomen steel blue, antennae pectinate wings rather narrow.

a. Hind wings transparent in the center, C. Fulvicollis.

aa. Hind wings not transparent in center, C. Virginica.

19. *Lybomorpha.*

Size medium, wings rather narrow, body black, base of wings yellow outer portion black, L. Pholus.

20. *Eudryas.*

Size medium, fore wings and shoulder coverts white, hind wings pale ochre; dark reddish brown border extending round the hind and outer margin of fore wings and basal half of costa, and part at least of outer margin of hind wings, edged internally with green on fore wings.

a. Border of hind wings extending from anal angle to apex. E. Unio.

aa. Border extending half way to apex, E. Grata.

BOMBYCIDAE.

21. *Hypoprepia.*

Size small, fore wing rather narrow; hind wings red with black border, fore wings wholly or partly red, two long and one short black stripes.

a. Basal two-thirds of fore wings yellow, outer red, H. Facosa.

aa. No yellow on fore wings, H. Miniata.

22. *Cisthene.*

Size small, hind wings red with black border, fore wings with broad black stripe through center, filling the whole of the outer border but with large indentation near apex and posterior angle. The rest of wing reddish, or with part of posterior margin black, C. Subjecta.

23. *Crocota.*

Size small, wings moderately broad, color ochre, fore wings somewhat tawny.

a. Only a black spot at anal angle of hind wings, C. Ferruginous.

aa. Hind wings with outer border of black spots, C. Rubicundaria.

24. *Utetheisa.*

Size medium, fore wings buff crossed by several white bands containing black dots, hind wings pink with outer border of black.

U. Bella.

25. *Callimorpha*

Size medium; wings ample; antennae simple in both sexes, ciliated two strong setae at each joint; abdomen concolorous with the hind wings.

a. Wings white costal margin yellowish, C. Leconiei.

aa. Hind wings ochre yellow.

b. Fore wings yellow, margined with brown, which is interrupted at posterior angle and apex, C. Interrupto-marginata.

bb. Fore wings pale yellow, margined with brown and having a network of brown near the apex, C. Clymene.

26. *Arctia.*

Size medium; stature robust; antennae slender, rather long, simple or pectinate; hind tibiae with four spurs, fore tibiae simple; abdomen with dorsal and lateral row of black spots which are sometimes blended into stripes.

a Ground color of fore wings black and of hind wings red, fore wings marked by longitudinal and transverse carneous lines, the outer of which makes an M at the end of wing.

b. Hind wings bright red.

c. Two transverse lines on fore wings besides the M.

d. Transverse lines at base of the M bent, A. Virgo.

dd. Transverse line at base of the M straihgt, A. Rectilinea.

cc. Only one short line at base of M, A. Nais.

bb. Hind wings pale flesh color, the black of fore wings in small angular spots, A. Arge.

aa. Ground color ochre, A. Isabella.

aaa. Ground color white, hind wings of male ochre. A. Acraea.

27. *Ecpantheria.*

Size large, body robust, abdomen blue with rows of yellow spots, wings white, the fore wings thickly spotted with black rings.

E. Scribonia.

28. *Spilosoma.*

Small or medium, abdomen yellow, with white at the ends and rows of black and white spots, or white without spots, wings white with one black spot to each wing, or without any.

a. Abdomen yellow with spots, S. Virginica.

aa. Abdomen white, small, S. Textor.

29 *Euchaetes.*

Size medium; abdomen yellow with rows of black spots; antennae pectinate, color gray or yellowish white.

a. Ground color drab gray, no marks on wings, E. Egle.
aa. Ground color yellowish white,
b. No marks on wings, head yellowish, E. Oregonensis.
bb. Costa of fore wings and prothorax yellow, E. Collaris.

30. *Halesidota.*

Size medium, body stout, wing long, abdomen extending about a third of its length beyond the hind wings.

a. Ground color ochre,
b. Very pale, fore wings crossed by several rows of contiguous darker blotches which, with the shoulder tufts, are edged with green, H. Tessellata.
bb. Moderately dark, fore wings crossed by several rows of brown contiguous blotches, H. Maculata.
aa. Ground color brownish yellow, fore wings with several rows of white spots, H. Caryae.

31. *Orgyia.*

Size small, female wingless, wings of male ample, and antennae heavily pectinate; color gray with more or less of brown.

a. A white crescent near the posterior angle of fore wings, O. Leucostigma,
aa. Fore wings paler with numerous whitish patches so that the white crescent is not prominent, O. Leucographa.

32. *Lagoa.*

Size from small to medium; body short, stout, very pilose; antennae pectinate; fore wings wooly, especially on the basal half, costa and base of fore wings dark,

a. White tinged with yellow, expanse a little more than one inch. L. Crispata.
aa. Pale yellow, expanse 1.50 inches or more, L. Opercularis.

33. *Euclea.*

Size small, body rather stout, pilose, antennae pectinate, wings moderately broad, outer margin rounded; color brown, fore wings with one or more central green patches.

a. Fore wings with one central green patch indented on posterior side, E. Paenulata.
aa. Fore wings with two green spots,
b. Posterior spot longitudinal, deeply indented behind, E. Querciti.
bb. Posterior spot triangular, E. Quercicola.

34. *Parasa.*

Structure the same as Euclea, Fore wings green, outer border and costal patch at base brown, P. Chloris.

35. *Limacodes.*

Structure similar to Euclea except that the female antennae are simple, color brown or yellowish brown.

a. Posterior and outer border of fore wings yellow. L. Scapha.

aa. A white irregular transverse line beyond the middle of fore wings. L. Fascicola.

36. *Empretia.*

Structure similar to Limacodes, the female antennae being simple; fore wings dark ferruginous with two small white subapical spots, E. Stimulea.

37. *Phobetron.*

Structure as in the last; forewings bluish, more or less clouded with dusky, transverse wavy bands of yellowish brown; hind wings brown, P. Pithecium.

38. *Thyridopteryx.*

Female wingless; male wings transparent, expanding about an inch, body black or dark brown, T. Ephemeraeformis.

39. *Perophora.*

Body stout, thickly clothed with short hairs, antennae pectinate; wings rather long, pale ash red with minute black points, a dark brown oblique stripe bent backward before the apex, P. Melsheimerii.

40. *Apatelodes.*

Size medium, body robust, antennae pectinate, wings dentate, fore wings angled, and apex pointed. Color gray with two dark transverse lines, a subterminal row of light spots and two subapical white spots, A. Angelica.

41. *Ichthyura.*

Size medium, body long, the abdomen extending one third of its length beyond the hind wings, color ashen, fore wings with three obscure white transverse lines, two oblique brown shades and a yellow or reddish subapical patch, I. Inclusa.

42. *Datana.*

Size medium; body rather stout, abdomen longer than hind wings; male antennae pectinate, female simple; color brown or yellowish brown, fore wings with four or five transverse brown lines, thorax dark brown, D. Ministra.

43. *Nadata.*

Color and characters similar to 'Datana.' Two transverse lines to fore wings, thorax not dark brown, N. Gibbosa.

44. *Gluphisia.*

Size small, body moderately robust, abdomen but little longer than hind wings, antennae pectinate; color gray, the fore wings with a brown line at the base and one near the middle, bordered each side by light with rudiments of a third line. G. Trilineata.

45. *Nerice.*

Size medium; thorax tufted, antennae pectinate; color gray, fore wings with broad brown space through the center edged posteriorly

with white, two teeth extending back on posterior side shading out into the gray. N. Bidentata.

46. *Edema.*

Size medium; body rather large, abdomen longer than hind wings; male antennae pectinate, female simple; color gray, white along outer half of costa, E. Albifrons.

47. *Coelodasys.*

Size medium; body only moderately robust abdomen extending one third its length beyond the hind wings; color brownish gray, dark through the middle of fore wings with a light stigma and costal and posterior margins, hind wings light with brownish inner and outer edges. C. Cinereofrons.

48. *Heterocampa.*

Size medium; body moderately robust, abdomen extending a third of its length beyond the hind wings, basal three-fourths of male antennae pectinate, female simple; fore tibiae dilated; general color gray.

a. Fore wings bright ash gray marked with brown or greenish.

b. Basal and posterior part of fore wings marked with black and shaded with green, H. Pulverea.

bb. Basal and posterior part of fore wings gray; an oblique white mark near the apex, shaded behind with brown. H. Obliqua.

aa. Dull gray without marks. H. Marina.

49. *Cerura.*

Size medium; antennae pectinate, a delicate gray moth, fore wings crossed by rows of orange and black dots on the veins, hind wings white with outer border of black dots, C. Borealis.

50. *Dryocampa.*

Size medium; body stout, densely pilose; antennae shorter than thorax, male pectinate more than half its length, female simple.

a. Body ochre yellow, fore wings with one white stigmatal spot and oblique purple line.

b. General color reddish ochre, purplish on outer border, D. Stigma.

bb. General color ochre, faintly tinged with purplish red, fore wings of male partly transparent, D. Senatoria

bbb. Fore wings purplish brown, male with large transparent space in the fore wings, D. Pellucida.

aa. Body brownish gray with ochraceous tinge on the thorax and fore wings, two white stigmated marks, hind wings crimson, D. Bicolor.

aaa. Body straw color, fore wings rose with white oblique band. D. Rubicunda.

51. *Eacles.*

Size large; body large stout; female antennae simple, male pectinate two-thirds of its length; wings ample, color yellow with oblique purple stripe to each wing and many other purple spots.

E. Imperialis.

52. *Citheronia.*

Structure similar to Eacles. Color of fore wings dark green, veins red, with six or more yellow spots. C. Regalis.

53. *Clisiocampa.*

Size from small to medium; body robust, densely pilose; wings ample, rounded at the ends; antennae pectinate;—color brown. Our tent caterpillar moths.

a. Fore wings with two transverse yellowish white lines. C. Americana.

aa. Fore wings with two brown transverse lines. C. Disstria.

54. *Tolype.*

Size medium; structure similar to Clisiocampa, color gray; thorax, veins, terminal, subterminal, and basal lines, and band across wings white, F. Velleda.

55 *Actias.*

Size large, wings green, costa and outer margin dark purple, discal transparent eyespot to each wing, hind wings with long tails. A Luna

56. *Telea.*

Size large, color russety ochre or russety ferruginous, transparent discal eyespots to each wing, circled with yellow, blue and black, the latter very prominent on hind wings. T. Polyphamus.

57. *Attacus.*

Size large, antennae deeply pectinate, abdomen not anulate with white and reddish fulvous apex of fore wings rounded but somewhat produced, an eyespot near the apex, usually a discal lunate or angular spot.

a. Ground color dusky greenish yellow, or olive, A. Cynthia.

aa. Ground color brown, or reddish brown, outer margin drab.

b. Submarginal row of spots on the hind wings oblong, A. Promethea.

bb. Submarginal row of spots on the hind wings crescent shaped especially those near the anal angle, A. Angulifera.

58. *Samia.*

Our largest moth. Body reddish fulvous, abdomen banded with white, wings grizzled dusky brown, margin clay yellow with subapical eyespot, discal spots lunate, S. Cecropia.

59. *Hyperchiria.*

Size large; body robust; male antennae pectinate, female simple; females purplish brown, males yellow, a large eyespot in a yellow field

on each hind wing. H. Io.

60 *Encronia.*

Antennae pectinate; black, tip of the abdomen red, each wing with a broad white transverse band, containing a black discal spot, the wings not thickly clothed with scales. E. Maia.

61. *Xyleutes.*

Size large; body robust, antennae moderately pectinate; wings rather narrow, the fore wings much longer than hind wings and outer margin oblique, fore wings gray with a network of black lines, hind wings of male yellow with a black base, female gray. X. Robiniae.

Poison Bottle.

I have so many calls for a method of preparing this that I can perhaps do no better than before closing add a brief description of the process. First, into a large mouthed bottle put several pieces of cyanide of potassium, the quantity depending upon the size of the bottle, and pour in water to the depth of about half an inch. Next, put plaster of Paris slowly into the bottle until all the water is taken up and you have a solid cake in the bottom of the bottle with some dry plaster on top of the cake. Tip the bottle on its side and turn it till the dry plaster has taken up all the moisture round the sides of the bottle. After this wipe the insides of the bottle from the mouth to the cake with a dry cloth, turn out the plaster and wipe again and cork the bottle when it is ready for use.

Those working in insects will find it convenient to have several of these bottles, one for killing in and one or more to which they may be transferred after they are dead, especially if the insects captured belong to the order Lepidoptera, otherwise they will become mussed and worthless. Lepidoptera should remain in the bottle from twelve to twenty-four hours before spreading that they may be relaxed from that after-death stiffness which renders it difficult to spread them soon after they are taken without injury.

New Insects, etc

In order to get perfect specimens of some of our insects, especially in quantities desirable, it is necessary to rear them from the larvae or eggs. During the past year I have reared a large number of several kinds for that purpose, several hundred of which I wintered over in the chrysalis state. In doing this I have sometimes found larvae that I have been unable to find described in any books to which I have had access, as well as reared parasites that were important as they destroyed injurious insects. Two of these parasites, small hymenopterous insects, were found to be new to science and were described in the Canadian Entomologist, Vol. 12, page 42, as follows:

Microgaster Utilis, French.

Length .11 of an inch. Head, thorax and abdomen of the males uniform black, the females the same with the exception that the under side of the second and third basal joints of the abdomen are tawny. Antennae fuscous, somewhat rufous at base. Legs and feet tawny, rather pale, the knees of the hind pair dusky, the most so in the male. Wings hyaline; costa, stigma and veins fuscous except the two veins extending from the substigmatal cells to the outer margin, which are hyaline. Ovipositor partially exserted. All parts of the body, wings and antennae, moderately covered with a very short whitish pubescence, to be seen on the wings only with the aid of the microscope.

The cocoons are compact, except a little loose silk around the outside usually only partially surrounding the dense portion. When spun the most of them are detached from the caterpillar in which the larvae have been parasites, and they are not placed together in any regular order.

This description was taken from eleven males and four females reared from a larva of 'Sphinx Carolina,' and five males and seven females reared from a larva of a species 'Leucania.'

Macrocentus Iridescens, French.

Length .13 of an inch. Head piceous, the mouth parts, including the clypeus, tawny; antennae rufo-cinereous, the basal joint yellowish. Thorax light rufous, darkest on posterior part, paler beneath. Wings hyaline with strong irridescence, the veins costa and stigma fuscous. Feet and legs straw color, the last tarsi of hind feet a little darker. Abdomen rather slender, rufo piceous, under side of middle joints slightly tawny. Ovipositor not exserted. Under the microscope a fine grayish pubescence is seen on all parts of the insect, sparse on the abdomen and legs, but profuse on the antennae and wings but not interfering with the irridescence on the latter.

Described from five males and seven females reared from two larvae from an elm tree that were taken to be 'Eugonia Subsignaria.'

A species of Arctia, that I described in the same periodical a little more than a year ago, is so commonly found here that it may not be out of place to reproduce the description here.

Arctia Rectilinea, French.

Average length of male .50, of female .55 of an inch. Expanse of wings of male 1.30, of female 1.50 inches. Head reddish flesh color, or in some lighter; eyes and palpi black; antennae dark brown or brown black. Prothorax and thorax the same color as the head, the first with two, the second with three longitudinal black lines. Abdomen bright scarlet the dorsum either a broad black stripe dentate on the sides, or broken up into a series of oval black spots, one to each segment; a row of black spots at the sides.

Fore wings black marked as follows with the same shade of flesh as the head and thorax; all the veins, the costa and hind or inner margin, a line running from the base of the wing to the end of the third median veinule—this may be called the subdiscal line—and three transverse lines that extend from the costa to this subdiscal line. The first or inner of these transverse lines is nearly in the middle of the wing, the second crosses the wing at the end of the discal cell. These two lines are straight, The third pursues a zigzag course, starting on the costa between the second line and the apex, extends to near the base of the fringe between the second and third disco-cellular veinules, makes an acute angle and joins the second line at the juncture of the first and second median veinules with the median vein, from this it extends to the end of the subdiscal line.

Hind wings bright scarlet with a narrow outer and costal border of black, and a large black discal spot and three large spots of the same color near the outer border. Of these the middle of the three spots is free but the discal and the first and third of the submarginal spots are usually blended with the border.

The under side is so much like that of other Arctians of the group to which this belongs that it is not necessary to describe it here.

We have in the books a fair description of the mature larva of the Cresphontes butterfly, but I have not seen any description of the caterpillar in the different stages through which it passes. As I have recently reared quite a number of them from their first hatching through all their stages and will append a brief description here of such of the points as may be new.

Papilio Cresphontes, Cram. Larva.

When first hatched the larva is of a brown color, having a large white or yellowish white spot on the back about the middle of the body and another of the same color on the posterior part. The surface of the body appears velvety, under the glass this is seen to be caused by minute tubercle like projections that are found all over the body. The anterior part of the body is larger than the rest, being of about the same proportion that it is through all the larval period. When the skin is cast the velvety appearance disappears and the skin is smooth and appears as though wet. As it increases in size there is some gray mixed with both the brown and the white and there is a white strip extending along the sides of the thorax and over the neck.

In the South this caterpillar feeds principally upon the orange and lemon trees but with us prickly ash forms its usual food. It takes about 22 days to pass through its larvae state and it remains in its chrysalis from 16 to 22 days. This applies to the larvae found on the bushes the last of May or the first of June, and which come out as butterflies in July. There is another brood in the fall that pupate in October to come out as butterflies the last of April or the first of May.

Orgyia Leucographa, Wlk. Larva.

Length one inch. Body gray, dorsal line black. On each segment there are 6 tubercles from which proceed thick tufts of hair, those tufts along the sides long, the rest short and matted. The dorsal tufts on joints 4, 5 and 11 are black, all the rest are light gray. Besides these there are two long black pencils of hairs extending out from each end of the body.

This was found on a persimmon tree, May 26, 1879. It pupated in a loose cocoon between leaves July 19, moulting twice in the interval but retaining the same characters. August 4 the moth appeared. While in confinement it fed most of the time on elm leaves.

Heterocampa Pulverea, G. — R. Larva.

Length 1.25 inches. General color bright green, head gray, a little lighter through the center. Joint 1 contains two dark purplish black warts on the back, reddish purple at the base and whitish between them. From these a purplish brown line extends backward, at first about a sixteenth of an inch wide but diverging to the region of the subdorsal at the posterior part of joint 4, from this extending to the back part of joint 6. This purple brown color extends over the posterior part of the dorsum of joint 6, the whole of joint 7, and all but a little of the posterior part of joint 8, where it separates and runs as a line each side of the back to the posterior part of joint 9. On joint 4 a spur is given off that runs to the third thoracic leg, another runs to the first abdominal leg on joint 6, with another downward spur on joint 9. On joint 3 begins a dorsal orange patch that reaches back to joint 6 filling the space between the purple lines. On joint 9 is another orange patch that sends the spur down the side with the purple brown spur. Joint 10 has no purple, and only a little orange below the stigmata. It has also a faint yellowish dorsal line. Joint 11 has purple brown subdorsal lines with orange on the back. These lines unite on joint 12 and form a broad dorsal line. Feet and legs purple. The body is deeper than broad, tapering a little from the middle to the head, but more posteriorly.

Found June 30 in Union County on an oak tree; July 6, it went into the dirt of the breeding cage to pupate. The moth appeared August 6. While in confinement it ate the leaves of both the red and the scarlet oak.

Clisiocampa Disstria, Hub. Larva.

Length 1.25 inches. Body rather slender, color greenish gray with a series of orange ochre patches on the back and faint stripes on the sides. All over the body were sparce gray hairs somewhat clustered in tufts.

This was brought me by George Brush May 20. The 24th it spun a cocoon of ochre colored silk in an upper corner of its cage, and the moth came out June 5. While in confinement it ate rose leaves.

Dryocampa Pellucida, A.-S. Larva.

Length about 1.25 inches. General color pale dull green striped with five red stripes, being substigmatal, subdorsal and dorsal, the last very pale so as to be almost obsolete. Head with a slightly yellowish tinge. On each segment there are six short black thorns or sharp points, the two on the back of joint 2 being about a quarter of an inch long, but the rest much shorter.

These were handed me by John Marten September 15. Two days after they moulted when the green was changed to black, the red stripes remaining with small white dots all over the body, and the head changed to a yellowish olive. They were found on oak and fed on the same in their cage, any species of which they seemed to eat readily. October 2nd most of them had gone into the dirt to pupate. They came out as moths at intervals from May 10th to May 21st.

Harris in his "Insects injurious to Vegetation," gives a description of this larva that may apply to some of its earlier stages but does not apply to the ones I had after I received them and hence I gave the above description.

Acronycta Rubricoma, Guen. Larva.

Length 1.25 inches. Color of body yellowish green, a blackish dorsal stripe bordered each side with a yellow line. Head black. From the back of joints 3, 4, 5, 6, 7 and 11 arises a thick tuft of hairs about one-fourth of an inch long. These are white in the younger specimens but blackish in the older. Tufts of light hairs about half an inch long cover the rest of the body though not very thickly.

These were found June 9th curled up in the center of hackberry leaves. June 10th the oldest began to spin in an upper corner of the cage. They hatched from July 14th to August 5th. More of the caterpillars were found in September but were not reared.

Agrotis Lubricans, Guen. Larva.

Length about 1.25 inches. Color grass green marked with white and black as follows: A broad substigmatal line of creamy white that is edged a little above with black in the anterior part of the body; and below, in the middle of each segment, by a little clouding of the same. On some there is a very faint subdorsal line of greenish white, edged below with black, but on most only the fine black line is perceptible. Dorsal line very narrow, greenish white, Piliferous spots very small, faintly black, Stigmate edged with black.

Found in garden September 3, September 6th the first disappeared beneath the dirt, and the first moth appeared October 8th. Fed mostly on grass,

I published the substance of the above description in the Canadian Entomologist, Vol. 12, page 14.

Manestra Distincta, Hub. Larva.

Length about 1.25 inches. Color bright green, irregularly mottled

with greenish white and five longitudinal lines of the same. These are a very faint dorsal line bordered each side with dark green, subdorsal more distinct and not bordered with darker green, stigmatal line faint. Head of the same color as the body, but of a more uniform green.

This was found feeding on a grape vine June 22. It soon pupated below the surface of the dirt of its cage, and the moth emerged the 21st of the following March.

Leucania Phragmitidicola, Guen. Larva.

Length about 1.25 inches, body thick and robust. Ground color a light gray, mottled somewhat with fine brown. Dorsal line fine, with a brown shading each side; subdorsal line dark brown, quite distinct. Between these lines, or in what may be called the dorsal space, there are several fine brown lines that scarcely interfere with the general ground color. Just below the stigmata is a flesh colored line. The lower half of the space between this line and the subdorsal, which may be called the subdorsal space, is occupied by two faint lines, mottled with the ground color. These lines are separated by a fine line of pale buff. The upper half of the subdorsal space is occupied by two pale buff mottled lines, separated by a fine pale brown line. The space from the stigmatal line to the feet, or the substigmatal space, and the under part of the body are a little lighter than the general ground color. Head gray, striped with several brown stripes, inverted Y narrow, light cervical shield obsolete, piliferous spots small.

These were found March 20th and 21st of various sizes. They began to pupate subterrean April 1st and the first moth appeared April 21st. They were fed on several kinds of leaves but ate only grass.

Chloridea Rhexiae, Westw. Larva.

Length about .75 of an inch, color brownish gray, obscurely striped on the back with fleshy yellow, the stigmatal stripe more distinct. Piliferous spots black, distinct, the two dorsal on joints 4, 5 and 11 much more prominent than the rest. The head in most of them a little darker than the dorsal part of the body, with a dark patch on the neck. A few scattered gray hairs over the body.

These were found September 22 on a bouquet that had been standing several days. They fed a few days on Snap Dragon and Pelargonium when they went beneath the surface of the dirt to pupate. The first moth appeared March 30th.

Amphalocera Cariosa, Led. Larva.

Length 1.20 inches; moderately robust, tapering slightly from joint 3 back but more abruptly forward. Beginning on joint 2 is an orange dorsal stripe that reaches to the posterior part of joint 11. The stigmatal stripe is orange, both of these rather broad. All the rest of the body is black. The dorsal stripe has three rows of pale spots, one central and one each side, making almost continuous lines. The black

space between the orange stripes contains five white spots to each segment, two long ones forming a nearly continuous subdorsal line. Head spotted with white. The body is smooth with the exception of a few small brownish hairs.

These were found September 21st in the leaves of pawpaw. In feeding they fasten several leaves together with silk and live in the enclosure. I found all the central leaves of this mass dead, usually one or two green or partly green leaves attached to the outside. Upon these the insect seemed to feed at night. The last one had entered the dirt to pupate October 2nd. The moths issued at intervals from May 31st to June 26. The chrysalis upon examination was found to be in a tough cocoon of silk mixed with dirt on the outside.

I presume I have descriptions of other larvae that should be added here but the moths of some have not emerged yet and I have not for want of time made a careful examination of some to see whether they have been described or not. Besides these I have reared quite a number of larvae whose history is well known and from which I have secured a fine lot of insects, among which may be mentioned a perfect pair of the Royal Walnut Moth.

With this I have the honor to be very truly yours,

G. H. French, Curator.

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SEVENTH ANNUAL REPORT

OF THE

PRINCIPAL OF THE

Southern Illinois Normal University

Made to the Board of Trustees

MAY 24TH, 1881.

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SEVENTH ANNUAL REPORT

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PRINCIPAL OF THE

Southern Illinois Normal University,

Made to the Board of Trustees

MAY 24th, 1881.

GENTLEMEN:—The close of another year brings the pleasing duty of presenting the Annual Report of the Principal of this University. It is first proper to acknowledge the goodness of the Heavenly Father who has preserved the health of teachers and students, so that no death has occurred among us. All the teachers have been enabled to perform their several duties with regularity and success.

In the year past, however, a vacancy has been made in your Board. The Master of all destinies has called one of the five who have been associated together since the opening of the school in July 1874. Mr. Lewis M. Phillips died December 27th, 1880. He was eminently fitted by education, by taste and by character, as well as by habit and zeal, for the duties of a trustee, and all know how earnestly he gave himself to the work. He was rarely absent from your meetings and his decease leaves a very large place in your councils to be filled by his successor. He certainly was a most efficient promoter of the interests of the University and a disinterested friend of the Trustees, Faculty and Students. His memory will not soon be forgotten. Suitable resolutions were passed by our pupils and teachers in commemoration of his worth. and a crayon portrait of him has

been placed in the Normal Hall by contributions made by the teachers, to remind ourselves of his life and sacrifices in behalf of education.

General prosperity has attended the school, and it is believed that its reputation and its power for good have materially increased during the year. One of the most gratifying tokens of our success has been the increasing demand for our students as teachers, and the growing favor of the public towards our system of instruction. It is certain that many more applications from directors for us to supply them with teachers have been received, than in any other year; and in some localities we know that teachers trained here are at once employed at higher wages and accepted more readily as to testimonials and examinations than those coming from other quarters. Both these facts are creditable to us, and cannot fail to encourage those who desire to adopt teaching as a permanent profession, to become well posted in all the various branches of our work. It was ascertained by a careful inquiry last Fall that three hundred and three (303) of our students taught schools in the several counties of the State during the winter of 1879-80, and that in the seven years of our existence as many as seven hundred and eighty-two (782) have been engaged as teachers since their connection with us. Some of these have been employed in the same district for three and even five years, and such persons often have the advantage in wages of five dollars per month greater, and of permanent employment without the cost of searching for a school. These facts we cannot fail to appreciate as creditable. But we wish it to be understood that our students do not seek to escape the most rigid scrutiny as to attainments and success in teaching. A careful attention to this scrutiny will tend to discourage imposters, who would be prompted to foist themselves on the public under cover of a claim that they had been our pupils, when in fact they might have been with us only a very short time. And it will also hold to a strict account all who have attended our school. Of course we desire the community to give all our pupils a fair chance in all things, examinations, teaching and living, but it will best please us when they are expected to do better work no less than to present better qualifications because of their connection with our University. While it would be unjust to demand a different standard of qualification or ability than is set up for others, it will not displease us to know in all cases, as we do in many, that they take with a respectful pride, their own full share of all work public or private, and ask no undeserved favors because they have been in part educated here.

As to the higher wages we must say with emphasis that we do not teach for such an end, so temporary and mean, as the matter of a few dollars in salary. The State gives to all who desire it gratuitous tuition, not to make them eager for more money, but eager for knowledge and power—to fit them better to be noble citizens and teachers. If they really become members of this class they will be likely to receive more cash for their better service, but the public will profit far more by having their children taught so much better and sooner. There will be in this case a better instruction and discipline, a better morality and honesty, and all with a less expenditure of time and money. Our students have shown no unwillingness to accept the country, ungraded schools and at the customary prices. They have labored in these and trusted that the current laws of better work by more skilful labor, and of supply and demand would finally regulate the amount of compensation to be awarded to their services. These primary schools are the most excellent places from which merit may rise, or in which industry and skill may show their superior value in educating the children of the people. They are at once the most responsible and most honorable positions, and if they do not afford the greatest emoluments they give the noblest opportunities. The aspiring young men and young women, almost all of this section, and indeed of the whole country, do now engage in the work of teaching rather as a temporary expedient to be sure. They use this place as a stepping stone from which to rise to a clerkship in a postoffice or a salesman's duties in a dry goods store, or to the honor of a wife in the family. Our purpose is to make the teacher so completely prepared for his work and so fill him with the love of it that he shall remain in it while he is able for its trials, and that he shall thus gain an added experience which shall improve our schools year by year. We would push immaturity and incompetence into the back ground and bring wisdom to the front in this duty, as it is in law or medicine. In short, our design is to supply this most important branch of the public service with competent ability and well instructed skill, and so abundantly that these latter shall compete for places in our public schools as ignorance and inexperience do now. While these latter are encouraged by school directors to under bid for starvation wages, the result cannot be greatly to the profit of our people. Our course of study and training will drive much of stupidity and blundering out of the teacher's profession, and introduce at least something of ambition to be prepared for a life duty and not a temporary day laborer service. By this work of ours each teacher is made so skillful and his individual power to instruct and govern is so

augmented that he shall perform a work doubled in amount and more than doubled in excellence. And at the same time the number of those seeking to do it shall be so increased that they shall bid against each other for the privilege of teaching. We thus induce the better grades of talent and the higher education, as well as the more practiced wisdom and experience, to compete for schools instead of the youth and ignorance of the unwise.

It seemed proper to say words on this point, where our design is sometimes misapprehended and where the effect of our work is not understood. As has already been said, too many suppose that teachers' seminaries, institutes, associations, meetings, are deliberately planned for one end alone, the selfish one of getting higher wages. Not at all. They seek to make better teaching not simply possible, but absolutely certain. In other words they aim by study, discipline, thought, discussion, intercourse, to give all such a familiarity of knowledge and skill of practice in imparting instruction as shall make failures less frequent and success not an accident in this most complicated, delicate and necessary of all the professions in a commonwealth. And if by any means the supply of thoroughly educated and trained teachers can be made to rise faster than the demand, one of two things, both highly profitable, will happen—either the wages will fall or the incompetent will be driven from the business. If, however, the demand shall exceed the supply nothing can hinder wages from increasing and the ill prepared from rushing in. It is to aid in preventing such a calamity that we seek to imbue the minds of multitudes with ambition to prepare for teaching and with a life purpose to follow it as a vocation. If we succeed in this endeavor and are encouraged by the public, teachers' salaries will not rise in proportion to their worth nor to the numbers and intelligence of those who will seek to serve their generation in the most philanthropic of all duties, imparting wisdom and virtue to the children of the age.

For reasons suggested by such considerations it may be well to review more definitely than at any previous time the peculiar duty and aim of a Normal University. There has been, it is best to say at the outset, some criticism made on the use of the ambitious word University in connection with an institution like ours. While neither the present Board of Trustees nor the Faculty chose the word as a title, and while all of us may confess that we should prefer a less pretentious name, it is nevertheless just to the excellent educators who did first select it for the school of teachers in McLean county, to say that their choice is by no means without defense. Premising that the term Normal or Training shall always be attached to the word University let us see what is signified by it and how accurately it describes what must be done for the education of the teachers of our State.

A school is a place where persons gather for instruction, work or

training in some branch of science or in the practice of some art, or in both; as a school of theology, or medicine, or painting, or design; as a school of oratory, or philosophy, or naval or military tactics. If it demands a previous culture and knowledge in order to admittance, its scope is narrow; but if it must give to its students a preparation to enter on its special work, then its curriculum must go down to the foundation and rise to the highest pinnacle, and embrace the University idea. The young people who will gather at such a Normal or teachers' seminary will be found to need something more to learn than the higher art or science of education. They must know the elements of knowledge with much more accuracy than the common diligence of the primary school can or will teach. A teacher should know the alphabet and the multiplication table better than a child, or than a youth of sixteen can possibly learn them among his companions in the best public school. The same should be said of reading or geography and especially of grammar and history. No common or superficial skimming of the contents of compendiums as he learns them while a mere scholar, will answer for a teacher. A learner who is to use facts or principles in daily life may only half understand and find no great difficulties from his lack of extensive knowledge. But a teacher who is to instruct and inspire, to help the child to remember and prepare him to recall, on the proper occasion, everything acquired should know every part of all these branches and the connections of all, and any half knowledge, such as is too often learned in a common or high school, will enhance the difficulties which surround the work of the teachers. This for the elements. It is possible for one to be so full of the higher facts, the more far-reaching laws, the recondite principles of a science, as to be not really a good teacher of beginners. The mind grasps the connections of reasonings and trusts that these will call up the elements. A philosopher holds by laws or abstracts and often forgets the facts which suggested them. How many of us know the action of gravitation as a general law and cease to think of the falling apple as the fact which suggested the proof of it? But the child must be first posted in these facts, and the teacher therefore is to be drilled on the facts till he knows them and can use them, combining, adorning, vivifying them, so that the scholar shall love them and remember them. It was said of a distinguished professor of Harvard University that while he was greatest in the whole world in his own science, he was notwithstanding a very poor teacher. Almost any tutor could instruct freshmen better than he. The conclusions were in his mind and he had forgotten the first steps, and would sadly stumble in simple additions. The child needs specially these first steps and if a teacher is to dwell upon them he must be so familiar as to know and

love them. It will therefore be a philosophical necessity for a Normal school to dwell on elementary studies, in their simplest form many times.

But the teacher must also know the higher lines of thought in these same studies, in order to inspire an ambition for progress, and to show how connections and transitions are made. This gives a very broad field, a long curriculum, minute at the first, less so as we advance, till at the end only a comparatively few general principles need be adduced or expounded. Here will be a place for a teacher to review very minutely and carefully the common studies of the early course, with the idea of learning exactly for himself just what a child needs to know, and exactly how that little one can best and most easily learn it and longest retain it. These considerations justify the name and suggest the extent of our work, but only in part, however, as further reflection will not fail to show.

But even if it could be fully proved that a teacher might learn the elements which he should be required to teach in our common schools, no one will assert that he can there learn the great principles which underlie all his professional work. Nor can he do this in any high school or college as these are now organized. They have other duties to perform, other studies to prosecute, and besides they cannot inspirit their pupils with an ambition to excel in teaching. Every detail relating to education, its methods, history, books, appliances, philosophy and maxims, all are to be studied and mastered. The teacher should be familiar with all the arrangements of a school, its buildings, apparatus, business, recitations, exercises and motives. He should know the child, its nature, mind, feelings and will, and understand how to elevate and improve his scholar by appealing to the highest incentives. To give him power to do all this he must be educated where he can learn from books, museums, cabinets and specimens, much about all nations, their histories, manners, customs, the products of their soil, of their looms, shops and art: so that when he goes among children he may be able to interest them without descending to fiction or the tricks of a showman.

But the highest necessity of a Normal school, the best part of its machinery will be its learned, practical, experienced teachers, men and women honored by their generation for the characters they have made for themselves even more than for their eminence in learning or their success in instructing. These become examples, living models, ennobling powers, to show what the profession can help a man to be as well as to do. And under these there should be honest, laborious students, and if of many grades, then the better will it be for the learners who are qualifying themselves to instruct, because they will find themselves among a body of persons who are seeking

knowledge in a philosophic spirit, guided by philanthropic minds who have great insight and great attainments, and where all the means for knowing the past and experimenting for the future are at hand.

It is thus seen that such a school as ours is must be carried on with a University idea in the minds of its professors. It becomes a model school and at the same time a place for original investigations and for thorough reviews of all branches of primary or elemental knowledge. It should thus be used to exemplify methods of teaching, individual mannerisms of teachers, results of training in the several branches, varieties of text books and the excellencies of each, systems of government and discipline, the different modes of presenting topics and calling out the energies of pupils. In this way it becomes in the highest and best sense a Training school and is more valuable for this end than for the amount of knowledge it imparts. Is might be said in this connection that perhaps three of the departments of a city graded school, a primary, an intermediate and a grammar school, could be added and would supply the best conditions under which teachers might learn the details of their duty and be saturated with the spirit of their noble profession.

While a Normal University should thus be a model in itself of methods of teaching in all classes, and while it should insist on a thorough review of all the common branches, it should also insist that each one who enters for the purpose of fitting himself to teach shall pursue each term at least one elementary study till the seven are completed, and he should be required to make an analysis of the matter to be learned in the branch and also to produce a topical abstract of the method of teaching it. These papers might be preserved or filed for future reference with the examination papers of such students, and this would not only test the knowledge, but the ability to plan school work and explain it by word and illustration. This would be of especial worth as showing the exact state of attainments now reached by pupils of our public schools, as well what is attempted as how perfectly it is accomplished. This would give a Normal school a body of facts serviceable to the public as well as to itself, and which could be used hereafter in the history of education.

It will bear to repeat concerning Cabinets, Museums, Repertories or Collections, to be gathered and preserved in such a University, that these are of scarcely less value than instructors. Indeed they do make themselves teachers and stimulators of inquiry and science, such as nature herself is, but more methodical and requiring little travel and cost in order to gather the lessons to be learned. These collections should embrace among other things every bit of apparatus which has been devised for the purpose of aiding the teacher to

present knowledge or impress truth on the child's mind, or to illustrate the laws of nature. For examples in the graphic arts, let the ancient tablet of wax and the stilus be shown, the papyrus leaf, the goat skin, the modern parchment, paper, quills and pens in many forms, and specimens of different styles of writing and printing also with engraving and drawing. Some of these things cannot be learned otherwise than by seeing and examining specimens. In arithmetic work there would be a place for counting frames and appliances to show and illustrate the combinations of, and operations on numbers, weights and measures, to give the eye a chance to assist the mind in comprehending magnitudes and dimensions and in preparing for practical business. In reading there are many contrivances both for teaching letters and words, sentences, emphasis, pauses, inflections where the eye aids the ear and helps to control the muscles of the mouth of larynx. In geography how valuable are maps, charts, elevations, models, globes. Instruments for measuring and drawing are in use to open the avenues to the mind or to fasten knowledge on the brain and a Normal school should possess at least a large share of these. Then historical compends and charts, tables of populations, areas and products, with reference books and whatever else may elucidate the past or give a knowledge of the present condition of the race should be admitted. It may be said that the cost of all this is large. But the real question is, will not the time saved to the child more than pay a very large cost? He will acquire his learning earlier and have it in a more available form, and in fact will retain it longer and better make proper connections with all other knowledge. Yet the money cost of all is comparatively small, since many of these appliances will be offered gratuitously if we have the means of preserving and exhibiting them.

And in the higher studies, as essential for many students and teachers as the elements are for all, the advantage of such appliances for illustration increases in a larger ratio. In Physics, in Chemistry, in Physiology, what can be taught without the air pump, electrical machine, pulleys, and other contrivances for showing weight, motion, laws of fluids at rest or moving; or re-agents, crucibles, retorts, blow pipe and laboratory; or skeletons, manikin and model of heart or brain? All these and lenses, telescopes and many more contrivances to exemplify the laws of light and magnetism, are as necessary as plows to the farmer, or the square to the carpenter. These all must be had or the mind fails to comprehend many of the most necessary ideas as well as the most useful in civilizing mankind.

But in the various branches of Natural History, Zoology, Geology, Botany and others, specimens of the objects themselves ought to be gathered by the pupils and preserved. Plants, woods, minerals,

eggs of birds, skins of animals—all that earth or air or water contains should be placed in sight for inspection and study, and many times for use and experiment. These specimens will cost something but nothing in comparison to their educational value. And if the several professors were paid salaries sufficient to enable them to devote time to travel and original investigation, they might collect large amounts of the very materials here described. In all these lines we have already done much. It is now the end of seven years and the State has not been able to grant any more than the slenderest pittance for all these objects so abundant in the promise of profit to the people and their children in making instruction a living delight to mind and soul. Yet we have by sacrifices and labors already filled a large room in the Mansard story so full, and with so large a variety, as to be absolutely bewildering to one without a guide. Dr. Thomas, formerly a teacher but now the Entomologist of the State, Professors Parkinson and French, the other members of the Faculty, and many students and their friends, have all exerted themselves to furnish specimens. If the present General Assembly shall continue the same liberality as the last two, we may safely say that a few years will make our school a foremost place for a student to learn, or even for a scientist to investigate, all the kingdoms of nature. It will be a source of profit and of power to our State, as it already is an honor, to those who have labored to build it up and enlarge its facilities for instruction.

Another thing should by no means be forgotten. We have accumulated a library, valuable and well arranged, adapted both to the wants of the student and the tastes of the general reader. Here again we are indebted largely to Dr. Thomas, who began it by securing a large donation of the publications of Congress—the Reports and Papers of the Smithsonian Institution, and other books. By the care of our Representatives and Senators, especially General John A. Logan, it has been increased, and also by judicious purchases which we have added to it till it contains about seven thousand volumes, and is the richest in books of pedagogical scienc eof any library, public or private, in the West. We have a laudable pride in this part of our equipment, and while young pupils may not be able to take advantage of its treasures, scholars find it giving them rare facilities for investigation and research.

Our own professors find it a stimulus to study and improvement. Indeed without such facilities as it affords for them to push forward their studies in every direction they would find their minds drying and shriveling. But with all our growing cabinets, museums, libraries and collections they need fear no stagnation of zeal or interest in all the studies and investigations of the age. It should be stated

here that the Armory in connection with the Military Department established by the general government is a valuable addition to our work. Each day students are instructed in the use and exercise of arms. This prepares the citizen for the defense of right and the enforcement of law. The instructions, the discipline, the drills, have had a manifest influence upon the young men in promoting a gentlemanly deportment and building self-reliant characters. The officer in charge, Lieutenant Hugh T. Reed, of the 1st United States Infantry, has been zealous, judicious and eminently successful in his department.

Our teachers need no eulogies and a few words will suffice to give them a just meed of praise. Their works praise them. While our system of earnest, unselfish labor is calculated and expected to make so many good teachers, it will not be in good taste to commend them individually. It is enough to say they have been at their posts often at a sacrifice of convenience and not unfrequently at the risk of health. Rarely has any one been absent, and then only from what seemed imperative necessity. I refer to the several reports of their respective departments for statements of work and suggestions. I cannot do justice to my own feelings if I refrain from speaking of the cordial good will and hearty sympathy which each one has shown to me personally, and to all the plans for promoting the interests of the University. Each one of them has made sacrifices to carry out the work laid out by the Trustees and demanded by the wants of this section of the State. They have labored, and particularly the ladies, at salaries smaller than in other institutions of like grade; and it is to be hoped the General Assembly will make it possible to give them the wages which they fully earn and which justice would award them.

Our Special Session last August was more largely attended, and especially in the higher branches of Natural History, was more than ever a success. All our teachers except Professor Hull were present, and labored very efficiently. Professor Hull was excused by the Trustees on account of the health of his wife, who needed his care in a Northern climate.

The total number of students is a little above the last year, but they are of a higher grade as to attainments. More of the young men and women who have received first grade certificates have attended. The whole number in school has been 397, and of these 197 entered for the first time, and they represent employments as follows, viz: Farmers, 127; merchants, 15; ministers, 13; physicians, 11; lawyers, 5; carpenters, 5; millers, 5; laborers, 5; shoemakers, 3; agents, 2; teachers, 2; civil officer, 1; contractor, 1; saloonkeeper, 1; barber, 1.

A few words may be profitably said concerning our graduates, and those who study among us longest and most thoroughly. Only 45 out of the 1,501 students enrolled have graduated. Of these 34 are gentlemen and 11 ladies. The total number of male students has been 883 and of female 618. It will thus be seen that while in the school the males outnumber the females in a proportion of less than 3 to 2 in the graduating classes they are more than 3 to 1. Among the teachers of the State as shown by the Report of the State Superintendent, the females exceed the males in a ratio very nearly 12 to 11. Why then do so many more young men graduate than young women? It is an interesting question and may receive several answers. It certainly does show that women do not desire a complete education as frequently as men do. This fact may mean that women do not want to fit themselves for a profession. Whenever teaching becomes a profession there will arise the necessity to study for it. The habits of the people and probably their instincts in the first case are against women becoming what may be called professional personages. And it is for the interest of the State that they should find a more congenial sphere in the private duties of domestic life. Besides this, these avocations, housekeeping, a wife's or a mother's employments do not promise a great return of money in payment for work. Women can, therefore, hardly be expected to see the pecuniary advantage of large expense in gaining knowledge, discipline or professional skill. They are quite as eligible for the position of wife—the presiding genius of a family, with little education as with much, and perhaps even more so. But they are not eligible at all as teachers for life without large knowledge, and are condemned to exhibit considerable even to obtain a temporary employment. This state of facts may be no recommendation of the intelligence of men who marry, but it is creditable to the public sentiment which demands that she who teaches children shall possess some learning and culture, whatever it may allow in her who bears and trains them. Thus encouraged to become wife with small information, and required to learn so much at great expense to become a teacher, is it a wonder that a young woman's education ceases short of graduation? and that her vocation of teaching is made to terminate as early as possible? It will be singularly unfortunate if the community forgets that an intelligent and well educated wife, to be the companion and life teacher of her own children, is of far more worth to society than a well educated lawyer or physician to conduct a cause in court or to manage a fever in a hospital. In truth she is more valuable in every sense and deserves as much culture and as full a recognition of right to all knowledge. While this in part accounts for the small number of highly educated women it shows the need of cor-

recting public opinion till it shall expect as high a grade of teaching from women as from men and with as large payment of salaries and as great a meed of honor. An influence prevails to a large extent to hinder the complete education of women in the prejudice which demands that women must marry early, or be subjected to bear the sneering title of old maid, and be made to feel that teaching almost debars her from domestic life. Then the smaller wages which she receives and the greater cost of her dress while teaching make it more difficult for her, than for a young man, to earn money enough to carry her creditably through a full course at a Normal. So that where the facts are, as among us, that the majority of students contrive to pay for their schooling by their labors, the women are at a great disadvantage. In city Normal schools where they can board at home or are supported by relatives, it is different, and there the majority. in many cases preponderating almost fifty to one, are females. It is thus wherever friends pay for the education of the youth. But where as here they are self-dependent. young men will more easily win their way and graduate.

The number of students for each term has been as follows, viz:

SPECIAL SESSION.

Ladies	22
Gentlemen	16

FALL TERM.

Ladies	110
Gentlemen	142

WINTER TERM.

Ladies	101
Gentlemen	150

SPRING TERM.

Ladies	97
Gentlemen	129
Total	767
Ladies	330
Gentlemen	437

IN NORMAL DEPARTMENT.

Paying tuition	209
Pledged to teach	558
Of these, ladies pay tuition	81
Gentlemen pay tuition	128

It affords the Faculty pleasure to recommend unanimously the following students, who have completed the prescribed course of study as candidates for graduation, viz:

In the Classical Course—Thomas Brown; Charles H. Burton; Henry W. Karraker; Thomas S. Marshall.

In the English Course—William F. Hughes; John William Lo-

renz; Oscar S. Marshall; Mary A. Sowers; Edward I. Ward.

It is proper to state that Mr. Brown has been a student four entire years without absence, tardiness or neglect of any duty. He prefers not to be graduated this year, although fully entitled to a Diploma.

GENTLEMEN:—Allow me to tender thanks on my own behalf especially, and on that of the other members of your Faculty for your cordial sympathy with us in our work and for your earnest co-operation with us in all our efforts to increase the facilities of the University for educating the youth of the land. I remain your obedient servant, ROBERT ALLYN.

May 24, 1881.

Department of Latin and Greek.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University;

DEAR SIR:—I have the honor to present herewith a statement of the classes and work in this department for the scholastic year 1880-81.

In the Fall Term the classes under my charge were as follows, viz: Greek Rudiments, four members; Latin Elements, Section A. fourteen members; Anabasis and Greek Grammar, three members; the Æneid of Virgil and Latin Grammar, seven members; Cæsar's Commentaries of the Gallic war and Latin Grammar, six members; Latin Elements, Section B. seventeen members.

During the Winter Term my classes were the following: The class in Greek Rudiments advanced to exercises in the translation of Fables, Anecdotes, Jests, Grecian Mythology, etc. Latin Elements, Section A., advanced to Latin Reader and Grammar. Class in Anabasis advanced to Memorabilia of Socrates, and continued the Greek Grammar. The Virgil class read the Orations of Cicero. Class in Commentaries of Cæsar, advanced to Sallust's Catiline, and continued the Latin Grammar. Latin Elements, Section B., advanced to Latin Reader and Grammar.

During the third term and at this writing, the classes under my charge are pursuing the studies in Xenophon's Anabasis and Greek Grammar. Roman History, Section A., and Latin Grammar, Homer's Iliad, Sallust's Catiline and Latin Grammar, Tacitus de Germania: Roman History Section B., and Latin Grammar.

During all the year I have also had charge of one division of Section D., in Orthography, composed of thirty-two members. Miss Jeannie B. Morrison, W. J. Ennisson and R. T. Lightfoot have rendered valuable assistance in correcting the spelling.

It will appear from the above that there have been nineteen classes in this department during the scholastic year, comprising in the aggregate something over two hundred members. It gives me pleasure to state that the students have very generally manifested a

commendable zeal, and have made excellent progress in their studies. A few from irregular attendance and want of proper application will fail to carry their work. Some few have dropped out of the classes, intending to pursue the studies again the next year. The grades of those who complete their studies, in most cases, from daily recitations and written examinations, have been excellent.

The classical course embraces three years of the Latin and two years of the Greek. Three students will this year very honorably complete the full classical course, and one will, in like manner, finish the Latin course.

The study of the Latin and the Greek is designed to aid in the preparation of teachers for the High schools of the State. The English language is, as is well known, a mixed tongue, embracing words from all the principal languages of the world. The Latin and Greek elements in our language are so numerous that they form the basis of not less than fifty thousand derivative words. They are so generally interwoven with the composition and etymology of English roots that a knowledge of them is absolutely indispensible to a thorough understanding of our own vernacular. The teacher of the English language who is familiar with the historic and philologic etymology of the Latin and Greek, is all the better qualified for efficient work.

The method of presenting the lesson at each recitation looks to the practical. Each lesson is examined as to its etymology and grammatical structure. The aim is to cultivate at the same time accuracy in memory and judgment; to reveal the intimate connection of the Ancient with our own language, and especially to render the student's knowledge of the English more thorough and satisfactory.

Added to my duties of the school and recitation room, I have performed the labors of the Registrar of the Institution. These at times have been multifarious and onerous. I have carefully enrolled in the aggregate the names of seven hundred and seventy-six students, giving date of entrance, parent's name, date of birth, nativity, etc.—have collected all tuition and incidental fees, and, on receipt, have transferred the same to the Treasurer of the University; have transcribed the minutes of the meetings of the Board of Trustees, into the record book; have placed on file all original bills; have prepared all vouchers in duplicate for current expenditure; have issued money orders on the Treasurer for the payment of all bills of indebtedness, and have kept a faithful account of amounts received and paid out; and have performed such other duties as pertain to the office of the Registrar of the Institution.

Respectfully submitted,

CHARLES W. JEROME.

IV. Department of Higher Mathematics and Practical Pedagogics---1880-81.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University;

DEAR SIR:—The following table gives the usual work in my department, by terms, for the school year:

HOUR.	FALL TERM.	WINTER TERM.	SPRING TERM.
1	*Surveying.	E Algebra.	D Algebra.
2	C Algebra.	B Algebra.	A Algebra.
3	C Prac. Pedagogics.	B Prac. Pedagogics.	A Prac. Pedagogics.
4	Analytic Geometry.	Differential Calculus.	Intregal Calculus.
5	B Geometry.	A Geometry.	Trtgenometry and Surveying.
6	E Algebra.	D Algebra.	

(*Work of class out of school hours.)

Few words will be needed to make the schedule plain. The algebra classes are of two grades, elementary and higher. The former requires two terms, the first of which is marked E and the second D; while the latter requires three terms and are marked in their order from beginning, C, B and A. The practical pedagogics requires three terms and the classes follow the letering of those in the higher algebra. The geometry requires two terms, the first of which is marked B and the second A.

Two classes in elementary algebra are formed each year, the first beginning with the Fall term and the other with the Winter term. Together these make the advanced class in algebra in the following year.

The usual recitation hour being too brief for good results in trigonometry and surveying, the Spring term class in these branches has the time of two recitations, as the schedule shows.

The analytic geometry and the calculus are optional studies and are not counted a part of either the English or the Classic course. Application was made at the opening of the Fall term for the organization of a class in these optional branches, but it was not deemed best by either the teacher of the department or the principal to grant the application, the labor of those applying being more needed in other directions.

The surveying class was excused from field practice in the Fall term, the previous term in these branches having proved unusually full and satisfactory.

With the exceptions just stated the classes have followed the tabular statement at the beginning of this report.

Of work not in the tabular statement, I have had a class in spelling each term, and a special class in algebra, organized for teachers who entered for the spring term.

The membership of the classes in this department has been as follows:

Fall Term—E Algebra 29, C Algebra 23, B Geometry 9, C Practical Pedagogics 12, Spelling 20.

Winter Term—E Algebra 16, D Algebra 26, B Algebra 19, A Geometry 8, Practical Pedagogics 10, Spelling 14.

Spring Term—E Algebra 22, D Algebra 12, A Algebra 16, Trigonometry and Surveying 9, Practical Pedagogics 13, Spelling 20.

Total in classes 278.

The greater part of the pupils in this department have been faithful and deserve praise. A few have neglected their duty in some measure, but the daily results in the classes warrant the assertion that in both the Higher Mathematics and the Practical Pedagogics the seventh year of our school has been a decided success.

Respectfully submitted,

JOHN HULL.

Department of Literature, Elocution and Reading and Vocal Music.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University;

DEAR SIR:—Herewith is submitted a report of the work done for the year 1880-81, in the department of English Literature, Elocution and Reading and Vocal Music.

FALL TERM.

Elocution, one class.....	Enrolled 17,	Passed 10
Reading A, " "	" 34,	" 24
" B, two classes.....	" 50,	" 24
Vocal Music.....	" 34,	" 19

WINTER TERM.

English Literature, one class.....	Enrolled 19,	Passed 16
Reading A, " "	" 29,	" 16
" B, " "	" 28,	" 12
Elocution, " "	" 15,	" 11
Vocal Music, " "	" 30,	" 17

SPRING TERM.

English Literature, one class.....	Enrolled 14,	Passed 9
Reading A, " "	" 33,	" 11
" B, " "	" 15,	" 10
Elocution, " "	" 26,	" 10
Vocal Music, " "	" 31,	" 15

In addition to the work of instructing the above classes, I have had under my charge during the last two terms, a class in spelling; and during the last vacation was present as instructor for a longer or shorter time at teacher's institutes in *four* of the counties of Southern Illinois.

On the approach of warm weather Calisthenic exercises were discontinued, but I have still had control of the Normal hall during the general exercise hour. I have freely given my services so far as regular duties permitted, to those needing special drill in preparing for exhibitions, and for the exercises of commencement day. To the students in the upper classes private instruction is especially valuable. It has been my opinion for some time that the seniors should have a thorough course in the cultivation of manner, for, as

the English Archbishop observed, "Manner is *something to all* men; it is *all things to some*." The teacher ought to be a model in grace, as well as in other things.

ENGLISH LITERATURE.

The first five weeks of the Winter term was devoted to the study of American authors and the remaining half and term following to English authors. The text book used is *Shaw's Revised History of English and American Literature*. Remarkable periods received most attention, and time has been found for the reading of copious extracts from the best authors.

Thus has interest been awakened and maintained, and a love for good reading developed. The pupils in this delightful branch of learning, with scarcely an exception, have worked faithfully and intelligently and therefore made satisfactory progress.

ELOCUTION AND READING.

As these differ but in degree repetition is avoided by including them under one heading.

A considerable part of a teacher's work in this department consists in eradicating bad habits. It is hard to learn, but harder still to unlearn. The tones, inflections, emphasis, manner and facial expression of a majority coming under my tuition are unnatural while reading, and in striking contrast to those used in conversation.

The fault is in the method of the primary teacher. Oral reading calls into exercise two sets of faculties, viz: the *perceptive*, (or *receptive*) by means of which the precise meaning of the author is comprehended, and the *expressive*, through the agency of which the thoughts and suggested emotions of the author are communicated to another. Teachers chiefly fail in teaching successfully the important art of oral reading, because they permit their pupils to try to express and convey thoughts not fully understood. Comprehension must precede expression. The logical order is, first understand, then express. The receptive faculties are first to receive attention, and ought so thoroughly to have been trained, that when the work of communicating thought, feeling and purpose to another mind, through the avenues of sight and reading is begun, they may do their work unconsciously and the whole soul be given to the expression.

I would not be understood as asserting that one who can grasp intelligently an author's meaning, can therefore adequately express it to another. Many a retired scholar reads Shakespeare with delightful appreciation who would make but a sorry appearance before the footlights in an attempt to delineate one of the powerful creations of the great dramatist. The agencies of expression, voice and

manner, would both prove unequal to the task. The ability to clearly grasp thought and strongly feel emotion, and the power to communicate them to others, are entirely different things. But it is self-evident, that without a good conception of that which is to be communicated, the most harmonious voice and expressive manner are vain.

Artistic respiration has been carefully considered, and breathing exercises have been used to assist in the development of the chest. The formation of a habit of full and free respiration is of the utmost importance to him who would read or speak with ease and power.

The tones of the voice have been considered and the five elements of a tone, quality, force, stress, pitch and quantity, passed in review, and their application to delivery exemplified and practiced. The good qualities of voice have been strengthened and the bad suppressed. The elements of simple utterance have been fully studied by the pupils in the reading classes and practice upon them has been most thorough as affording the best means of improving defective or careless articulation. Elements, sylables, words, phrases, sentences and paragraphs, accent, emphasis, slur, inflection, monotone, pauses, personation, and cadence all have been reviewed.

Nor has the cultivation of manner been neglected. Proper attitudes have been required and concert exercises in gesture have been given.

Nor yet has the professional part of our work been neglected. The methods of teaching reading in primary grades, Word, Alphabetic and Phonetic, have been discussed, as have also methods for variety, etc.

The progress of pupils, while not all I could wish, has been in the main satisfactory.

VOCAL MUSIC.

One term is devoted to this pleasing art. The classes have been large and enthusiastic. Only pupils of the Normal department are required to enroll themselves, but others are permitted to do so at their pleasure, and most gladly avail themselves of the privilege. No other class is so popular. Our pupils, even in the short time given to music, learn to sing ordinary church music with facility. It is my constant endeavor to so teach this refining art that the pupil may not only know the score himself, but will be able to instruct others and thus diffuse a knowledge and love of music among the people.

PHYSICAL CULTURE.

The time allotted to calisthenic exercises has been less this than for any previous year. The growing popularity of the military de-

partment, which has enrolled nearly all of our male students, is the chief reason for this. The cadets are relieved from any participation in these exercises. The students enter heartily into the various movements, and the beneficial effects upon form, health and carriage are too marked to admit of question.

All of which is respectfully submitted.

JAMES H. BROWNLEE,

Teacher of Literature, Elocution, and Reading and Vocal Music.

CARBONDALE, May 21st, 1881.

Department of Physics, Chemistry and Geology.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University;

DEAR SIR:—The following is presented as my report for the year 1880-81. The accompanying summary indicates the work done in class room:

FALL TERM.

	ENROLLED.	PASSED.
Elementary Natural Philosophy	27	20
Higher Natural Philosophy	23	20
Descriptive Chemistry	10	10
Rhetoric	11	11
Spelling, Class B	25	

WINTER TERM.

	ENROLLED.	PASSED.
Elementary Natural Philosophy	27	21
Analytical Chemistry (two hours)	14	14
Logic	12	12
Spelling, Class B	27	

SPRING TERM.

	ENROLLED.	PASSED.
Geology	10	10
Analytical Chemistry	3	3
Higher Natural Philosophy	18	14
Elementary Natural Philosophy	16	14
Spelling, Class B	33	

In addition to the above the general record of attendance has still remained in my charge. During the year considerable time has been given to classifying and labeling mineral specimens in the museum. The work in the class-room has in the main been satisfactory. Possibly in no other branches is it easier to arouse an interest and enthusiasm than in Natural Philosophy and Chemistry, yet more than this has been desired and in some measure accomplished. While these studies have been made attractive by experiments, they have also been sources of discipline to form habits of study and thought.

The tendency upon the part of the student to rely too much upon the entertaining exhibition of experiments has been studiously avoided, and chiefly only useful and practical illustrations have been given, and in most cases the students themselves have been required to perform them. The changes that were suggested in my last report with regard to text-books have been carried into effect, and with encouraging results. Especially may this be said concerning the Higher Philosophy. The one adopted has aided in securing more definite and complete work on the part of the students. The class in Analytical Chemistry was larger than ever before and exhibited a marked degree of enthusiasm. Yet their work was somewhat impeded and lessened in efficiency and completeness by the want of desk room. The present arrangement can very comfortably accommodate eight students; this we were obliged to distribute among fourteen which often made it very inconvenient. The supply and provision for laboratory work is about the same as in the first years of the Institution: and while they were sufficient at that time, are too meager for our present demand. It is therefore recommended that two additional working desks be made during the early part of the next school year, in order that they may be ready for the Analytical class the second term.

As much material for illustration is needed in Chemistry and Geology, and as the museum is so far from the laboratory the work in these branches would be much improved could a suitable place be provided to keep on exhibition and have ready for use at any moment. To meet this demand for a more convenient supply, it is recommended that the old case used for chemicals be fitted up for this purpose. The case thus prepared will furnish another inducement to secure an exhibit more or less complete of specimens in applied chemistry. During the year some attempt at this has been made, but for want of a secure place to preserve them but little has been accomplished. In recommending this exhibition of material for laboratory work, it is not the design to in any way to detract from or interfere with the museum. Only such specimens will be retained in the laboratory as will be needed for class work; and as far as possible have the choicer duplicates exhibited in the museum. This plan if carried out will leave the museum in better order and appearance than it can be without it.

In making our first purchases in apparatus it was thought expedient to select such as would give the greatest benefit possible from a small amount of money. Consequently the air-pump and electrical machine chosen are of medium value and power. Yet by selecting such as we did it left more funds by which to purchase attachments to these and other valuable pieces. These instruments have

served their purpose well, but the age and dignity of the school demand that we now have more perfect ones. When the Holtz electrical machine which we have was purchased, it was the best of the kind. But during the last seven years these machines have received much attention and many improvements.

For want of facilities but little has been done in dynamo-electricity. That the work may be satisfactory in the future it is recommended that a large plunge-battery be provided.

Since considerable space has been given to the needs of the department, before closing this report allow me to express my appreciation of the improvements that have been added to the laboratory in answer to the request made in the report of last year. The new case for chemicals is admirably suited to the purpose for which it was made. The same may be said concerning the fume closets and delivery tubes. Since these have been in operation the students at work in the laboratory and in other parts of the building have been entirely relieved from the serious annoyance of unpleasant gases, which have given so much trouble in previous years.

The water facilities have been much improved, thus making the laboratory work more pleasant and rapid.

The accompanying analytical table on the following page has been used by the students for general work, with Craft and Fresenius for directions in special cases.

Recognizing your deep interest in the welfare of the departments represented in this report, and an untiring zeal in securing efficient work throughout the Institution, I subscribe myself,

Your obedient servant

D. B. PARKINSON.

Analytical Table,

For the analysis of aqueous or slightly acid solutions of ordinary salts.

Add *HCl*

PRECIPITATE.

Hg (ous) Pb Ag.
Collect wash and add N H_4 HO Hg -v- blackened.
Pb -v-, still white.
Ag -v-, dissolved. Sb and Bi may also be precipitated by HCl but are dissolved on adding more HCl.

If HCl gave no -v- the metal is still in the liquid; add H_2 S.

PRECIPITATE.

Cd Cu Hg (ic) Pb Bi As Sb Sn Au Pt.
Collect wash, add (N H_4) $_2$S.

INSOLUBLE.		SOLUBLE.	
Cd, yellow.			
Cu, Hg (ic), Pb, Bi	black.	As(ous&ic), Su (ic)	yellow
		Sb orange	
		Su (ous), Au, Pt	black

Apply special tests for each to the original solution. See Craft's Qualitative Analysis.

If H_2 S gave no -v- add NH_4 Cl NH_4 HO, and (NH_4) $_2$S.

PRECIPITATE.

Zn Mu Co Ni Al Fe Cr.

Zn, Al	white
Cr green.	
Mn, skin tint.	
Ni, Co, Fe	black.

Test specially for each in original solution. Craft

(First add NH_4 Cl to keep up the Mg.)

If (NH_4) $_2$S gave no -v- add (NH_4)$_2$CO_3.

PRECIPITATE.

Ba Sr Ca.
To original solution add Ca SO_4
Ba -v- at once Sr -v- in 20 minutes.
Ca n -v-.

If (NH_4) $_2$CO_3 gave no -v- add Na_2 HPO_4.

Precipitate. Mg.

If no -v- apply special tests to the original.
K (violet flame -v- by Pt Cl_4)
Na, yellow flame.
NH_4 (odor by adding Na HO. and heating

Department of Physiology and History.

ROBERT ALLYN, LL. D.,
Principal Southern Illinois Normal University;

DEAR SIR:—During the past year twenty-three classes (including three in spelling) have been taught in this department, two of which, both in United States History, one in the Winter term and one in the Spring term, being assigned respectively to Mr. Daniel R. Miller and Mr. Thomas S. Marshall. All these classes, but especially those of the Winter term were unusually large and interesting, the work performed by the students in preparing for class exercises being more satisfactory than ever before, while at the same time there has been throughout the year a very marked increase over previous years in the number of students who have showed by their ready intelligent answers that they had learned to think for themselves—to rise above a mere repetition of a text-book statement not only to an understanding of the statement itself but to a thorough appreciation of all its relations and inferences. Thus many curious questions, directly or indirectly suggested by the text have been brought before the classes by the students themselves and the discipline and knowledge thus obtained have been by no means small. It seems apparent that the students entering the University come, as the years pass by, better and better prepared to do the somewhat difficult work required of them, a state of things resulting very probably from the fact that from year to year our numbers are more and more recruited from pupils of schools conducted by teachers who themselves have been trained in the classes of the University.

The classes in Physiology have not this year fallen behind any of the previous years in the earnest, faithful work of the pupils or in the enthusiasm with which almost everybody undertakes to pursue what is certainly in itself a most pleasant and profitable study. Recognizing the very great value of the eye in every attempt to acquire scientific truth, and at the same time the fact that what one learns by means of his own research and experimenting will be better understood and more certainly fixed in the memory than what is studied from the books or gained through the medium of lectures, it

has been my practice from time to time to furnish the pupils of these classes with small animals or portions of large ones to be dissected. An excellent plan it seems te me is to furnish each student with animals of the same species, and then after such general directions as may be needed to set all the dissectors on the right track either to hunt for the same or different things, letting each student commence and continue the work for himself. The zest and intense enthusiasm with which pupils enter upon this work is *prima facie* evidence of its real benefit and usefulness. By means of such dissections the relative positions of the organs of the thorax and abdomen can be thoroughly learned almost at a glance, while it is very difficult to do this even after much study of the diagrams to be found in the text-books. I will here describe a little anatomical experiment which never fails of eliciting the intensest interest on the part of pupils, and yet is such that any teacher with moderate care may very easily perform. Let an eye of an ox be *carefully* cut from the orbit and cut an oval aperture a short distance from the line that marks the boundary between the *sclerotica* and *cornea*. The aperture must be cut through the sclerotica and choroid coats to the hyaloid membrane which holds the vitreous humor, but the dissector must exercise especial pains not to cut or injure the humor just mentioned. Then let the sunlight shine through the aperture upon the retina, which delicate membrane can now be seen magnified by the three optic lenses lying above it, simply by looking down through the pupil of the dissected eye, taking care that the observer's eye is shaded from the sunlight. In this way the ramifications of the *arteria centralis retinae* may be seen as it divides out into the nervous screen of the eye, the red or scarlet color of these vessels contrasting vividly with the other retinal elements. This is only one of many anatomical experiments which any teacher with a little practice and care might be able to perform for his pupils or rather teach his pupils to perform. This course is especially commended to teachers who may have the misfortune or perhaps fortune of being so placed that neither model or chart is at command.

In this connection I desire to say that especial thanks are due to Prof. G. H. French of the Department of Natural History, who has given me valuable aid in my work by furnishing me with many anatomical specimens preserved in alcohol.

Some attempt at the teaching of Histology has been made in this department during the past year but of course it has had to be necessarily somewhat primary, and yet this comparatively recent branch of Medical Science has become so very important not only to the medical practitioner but also to everybody, that something of its

wonders should not only be taught to members of classes in Physiology, but pupils should be taught the use of the microscope and how to prepare specimens therefor, as the microscope is the very instrument which can in the hands of the intelligent and instructed observer reveal all these otherwise hidden sources of disease and death, it is of the utmost importance that pupils should receive some information how to use it. And here as in Comparative Anatomy and Physiology do Professor French's department and mine touch, and I am glad to say that pupils leaving my classes to pursue Natural History have the opportunity under Professor French's care of pursuing very much farther this science of microscopy than is possible in this department.

The classes in United States History have been very large during the year, several of them numbering over forty members each. The plan of teaching pursued has not materially differed from that of previous years.

At the commencement of the Winter term two classes in German were formed and put under my charge, one Class B meeting daily at 8 a. m., the other Class A, at the third hour. Class A embraced all those who had made considerable progress in the study of the language, and were prepared to commence the work of reading its literature, while Class B embraced those who had no previous knowledge of it. The attempt has been made, and I think with success, to combine the two plans of teaching, "The Grammar Method" and "The Natural Method," and while the grammar and the philosophy of the language have not been neglected, frequent object lessons have familiarized the student with the forms and modes of speech. The necessity for the teaching of this language in the University is seen in the fact that in the Southern section of the State there are whole counties almost exclusively peopled by those who use it as their mother tongue, scarcely knowing any other. It seems obvious, therefore, that it is well in such an institution as ours to furnish means whereby Germans may learn English, and Americans may learn German. These extra classes have entailed on me considerable work both during the regular school hours and outside of them.

Beside the regular work mentioned above I have spent one hour, per diem, throughout the year in the Normal Assembly Room in charge of such students as happened to be seated in the room at that hour.

Appended hereto are the statistics of my department for the year.

FALL TERM.

NAME OF CLASS.	NO. OF STUDENTS.	NO. PASSED.
Physiology, A	18	8
Ancient History	7	6
History of U. S.—A	5	2
History of U. S.—B, Div. 1	42	21
History of U. S.—B, Div. 2	41	22
Spelling—D, Div. 2	25	25
Total	138	84

WINTER TERM.

Modern History	9	7
Physiology, B	33	28
U. S. History, B—Div. 1	44	30
U. S. History, B—Div. 2	37	22
U. S. History, C	23	11
Spelling, D—Div. 2	19	19
German, B	20	5
German, A	8	8
Total	193	130

SPRING TERM.

Physiology, A	19	8
Physiology, B	13	8
U. S. History, C	18	18
U. S. History, B	37	30
U. S. History, A	13	7
German, A	8	8
German, B	4	3
Spelling, D—Div. 2	30	20
Total	142	102

Report of Library.

I have performed during the past year as during the preceding five the duties of Librarian. This work, requiring as it does the care of 7000 volumes, with their proper labelling, arrangement and numbering and also the keeping of accounts with students, has involved the employment of considerable time out of school hours. As the library increases the work increases, and it will soon become an important matter of consideration whether it would not be better for the Board of Trustees to employ the services of one person who could devote his whole attention to this work, rather than in the attempt to divide one's time between the work required in a large library and the work required in the class-room, one or the other or

both, in the necessity of the case should be more or less neglected. The students have this year made greater use of the means for reading, which the large and excellent library has afforded than during any of the previous years of its existence and it has been my constant care to give from time to time to all students who desired it, such advice as they needed to lead them to choose and to find the very books they needed, either as aids to their studies or to the preparation of their literary duties in the University Societies.

Yours very truly,
GRANVILLE F. FOSTER.

Department of Arithmetic and Astronomy.

ROBERT ALLYN, LL. D.,
Principal Southern Illinois Normal University;

DEAR SIR:—I hereby submit my annual report.

The whole number of pupils that have been instructed in my department during a part or all of the year aggregates 565.

Whole number of classes	20
First Term—207 pupils, classes	7
Second Term—200 pupils, classes	7
Third Term—156 pupils, classes	6

Pupil Teachers, Mr. J. W. Lorenz, Mr. T. S. Marshall, Mr. W. J. Eddy, Miss Emma C. Prim, Miss Mary Hassinger and Miss Eva C. Prim, have assisted in the work and are deserving of honorable mention for their success.

The work which has been done is indicated by the syllabus published in the catalogue. We have used Olney's Elements of Arithmetic as our text-book, except the third term the A Class used Ray's New Higher. We think well of it and would recommend its use next year. Its greatest fault is in not having a sufficient number of examples under each rule to impress its principles and processes thoroughly on the minds and memories of the pupils. But this will be no disadvantage to our classes, for we should spend much time in composing and working, and explaining original examples.

No person ought to be permitted to teach school who cannot readily make and explain an example, illustrating any principle or process of arithmetic.

Correct work has been made an especial feature in all of our classes. The habits of study formed by most of our students before coming to the Normal have been such that we have not succeeded as well as we had hoped in getting them to work without making mistakes. To do work correctly and know it is correct is a most important element of success. There is but one way to do it. It is drill, drill, drill on the combinations of addition, subtraction, multiplication and division until no mistakes are made. More than half the work done in elementary classes should be of this kind. The pupil

should know he is right, his self consciousness without possibility of fault, telling him he is right.

At the commencement of the school year I asked to be relieved from the general supervision of the spelling classes, and recommended that they be taught by the professors instead of pupil teachers as heretofore, believing better work would thereby be secured.

The request was granted and the recommendation adopted. Its advantage over the former arrangement has been apparent throughout the year. To me was assigned the A division of the class. Over four thousand words and phrases have been spelled. The first term special attention was given, according to the nomenclature of Webster, to the diacritical marking of the sounds of the letters. The second and third terms attention was given to the meanings of prefixes and suffixes, and the manner in which they modified the words to which they were attached, also to the spelling, pronunciation and meaning of words and phrases which have been derived from foreign languages but not yet Anglicized.

The class in Astronomy did good text-book work. The weather was extremely severe during the term and only a few nights were clear, so that less out-door work was done than usual.

The third hour of each day I have attended to Normal Hall work.

I have not been absent from duty a single day this year.

I hope to be able to do better work in the future than in the past.

My relations with the pupils and faculty have ever been of the most friendly and pleasant character.

Respectfully submitted,

A. C. HILLMAN.

Department of Grammar and Book-keeping.

ROBERT ALLYN, LL. D.,
Principal Southern Illinois Normal University;

In accordance with our custom, at the close of this my seventh year of teaching in the Southern Normal, I again have the pleasure of presenting to you a report of the work in my department.

During the first term I had seven classes; the second term I had eight, and the third term five. This makes for the year twenty classes, having a total membership of four hundred and fifty pupils. Which see as follows:

FIRST TERM.

Grammar, C—1st Division	30
" C—2d "	25
" B—1st "	28
" B—2d "	27
Analysis	15
Book-keeping	8
Spelling	26
Total membership	159

Classes, seven.

SECOND TERM.

Grammar, D—1st Division	20
" D—2d "	16
" C	41
" B	35
Analysis of Words	26
Spelling	21
Book-keeping, B	19
" A	7
Total membership	185

Classes, eight.

THIRD TERM.

Grammar, C	32
" B	27
" A	10
Book-keeping, B	20
" A	17
Total membership	106

Classes, five.

I regret the fact that this year, as in those previous, my classes have suffered much by members going home before completing the work of the term. The first term seems more excusable than the others, as many had measles and left sick, while others who had been exposed desired to be at their homes in case they would take the disease.

During the Fall and Winter terms Miss Wezette Atkins was assistant in the teaching of spelling. Her work merits praise for its excellency. The Winter term Henry A. Stewart and Mary A. Sowers assisted in Book-keeping. The former did good work during the six weeks he kept the beginners. Of the latter I can say her work was about faultless. She taught fifteen weeks, being a term and a half, and proved herself a thorough teacher. William J. Lorenz also taught four weeks, taking Mr. Stewart's place. He did the work well, though the time was short.

In Grammar Miss Lydia Snyder and Mrs. Mary H. Vaughn taught the two divisions of the D class the Winter term. The latter left after four weeks' work, and as some of the pupils had also left through sickness, the two divisions were united, and Miss Snyder taught both. Having Book-keeping at the same hour I could not be present at her recitations so frequently as I desired. From what I did witness, and the progress her class made, I can say she is an efficient worker.

The aim in teaching Grammar has been to give the pupils a ready use of correct English. In teaching Book-keeping I have sought to fit them to train the boys and girls of our public schools in the useful art of keeping a systematic record of ordinary business; also a knowledge of business terms and papers.

A large per cent. of those who remained to complete the work of any term, have shown results very gratifying. They compare very favorably with the same class of students in previous years. Incorrect English is much less frequent among our students than heretofore. Essays are improving in beauty and force of expression; and the spirit of "don't care" with regard to ungrammatical expressions is dying.

Respectfully submitted,

MARTHA BUCK.

Department of Natural History.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University;

DEAR SIR:—I have the honor to report as follows upon the work done in this department during the year 1880-81:

The general character of the work has been very much as that of last year. During the special or August session I had classes in botany and zoology in which the same general plans of work were followed. No particular text-books were required, though in arranging topics on the board from day to day the plan of arrangement of those in use in the regular classes was given the preference. In botany field work was done by the students. Besides plants needed for analysis, some were collected for the herbarium. One reason why students in the special session do not engage largely in pressing plants for themselves in the shortness of the time. By the time the class gets fairly into analytical work so much of the short time has passed that only the less succulent plants would have time to dry before the close of the session; still by taking these quite a number have been preserved.

In zoology more of the practical field work was done. Though the weather was such as is usually found in August, some ten or a dozen of both sexes went almost daily to the woods and fields to collect and study the habits of animals in their native retreats. This work was directed, in a measure, to the study of insects, and for a time the large and beautiful genus Catocala formed a great part of the collection of the class. I might add that during nine consecutive days in which captures in this genus were made, 835 specimens were taken. As heretofore, no class records were kept during this session, but at its close several were examined in both botany and zoology, the grades being entered in the large record and the papers filed in your office.

As the subject of natural history is taking a prominent place in our common schools, either as a study or by oral lessons from the teachers, it seems to me that to encourage not only class room drills and reviews in our special session, by teachers, but active field work

as well, is a wise measure. If the teacher is familiar with the common plants and animals with which he is likely to meet he has at his command a valuable means of interesting his pupils. Besides this, such a knowledge on his part will have its influence in securing the respect of his patrons.

During the Fall term I had two classes, the regular elementary zoology class assigned me on the programme and a special class in advanced botany. The statistics of the two classes is as follows:

Elementary Zoology.....	Number	14	Left class	4	Passed	10	
Advanced Botany.....	"	4	"	0	"	3	

The same text books have been used during the year, in the regular classes, as last year. For the Winter term only one class was assigned me with results as follows:

Advanced Zoology.....Number, 16 Left class. 2 Passed, 14

This was the regular class in zoology for the year. It was composed almost wholly of those reaching the study regularly, and as a result excellent work was done. The additional tables published last year for the analysis of moths increased somewhat our range of study by that process; and the exchanges and specimens lately received from the State Laboratory of Natural History, give us better facilities for illustrating than we have had before.

On the programme, I have two regular classes for the spring term, elementary and advanced botany; but as heretofore there has been a call for the two classes in zoology as well. These have been taught with the following results:

Elementary Botany....Number,	18	Left class,	4	Passed.	12	
Advanced Botany.....	"	34	"	4	"	30
Elementary Zoology...	"	11	"	2	"	9
Advanced Zoology....	"	13	"	3	"	10

So far I have had a call for these special classes every Spring term, mostly from those who have been teaching through the Winter, or for various reasons could attend school only during that term. For this reason I have asked that these special classes be published in our regular programme of recitations, with the understanding that they be organized only when a sufficient number ask for them to make it proper to spend the time in teaching them.

In addition to the above class work I have had charge of a spelling class during each of the Fall and Winter terms; and at the opening of the Spring term I instructed those not familiar with marking the sounds of letters in the diacritical marks till they were prepared to enter other classes.

As is understood, my time not devoted to teaching the above classes has been given to the regular museum work. During the year opportunity has been given to the students of the Natural His-

tory classes to do analytical and other practical work outside of the recitation hours, and quite a number have spent some time in such work. The value of such work to those who expect to use the knowledge thus gained in teaching or otherwise is great, and I regret that all of those in the advanced classes can not or do not so arrange their work as to profit by it. A little time was devoted to giving the advanced classes in zoology instruction in taxidermy. During the Winter term instruction was given to such as desired it in the use and management of the microscope, the students preparing their own specimens both for immediate examination and for future use. During the Fall term the microscope was used freely in studying vegetable physiology. It has also been used during the other terms but as they were shorter less time could be devoted to such illustration. It is important that those completing botany and zoology shall be able to analyze and know something of objects at sight, but they should also have some knowledge of the structure of some of the organs of both plants and animals that can only be seen by the microscope, and I wish our students had more time for its use. The increase of time which is to be given to our terms another year will enable us to be more thorough in this as well as other work.

Very respectfully submitted,

G. H. FRENCH.

Department of Geography and Elements of Language.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University;

DEAR SIR:—I respectfully submit the following report of the work done in my department during the year 1880-81:

The number of students in this department has been large and their application and proficiency, though not all that I could desire, have been very gratifying.

FALL TERM.

	PASSED.	DROPPED.
C Geography, 62—2 Divisions	36	11
B " 16	10	5
A " 11	8	2
D Grammar, 50—3 Divisions	32	8

WINTER TERM.

C Geography, 44	22	16
B " 47—2 Divisions	28	13
A " 9	6	3
D Grammar, 37	20	12

SPRING TERM.

C Geography, 10	6	3
B " 35	20	10
A " 24		
Physical Geo. 19	14	4
D Grammar, 45	20	15

Total 409

I also taught during two terms and a part of the third a small class in French.

The training of pupil teachers is recognized as quite an important part of our Normal work, and I have given some time and attention to this each term. During the Fall term one division of the D Grammar class was formed into three sections and put into the hands of pupil teachers whose work I superintended.—Misses Alice Krysher, May Duff and May Nixon.

Miss Alice Donovan taught a class in Geography—one division of

class B, and Mr. J. G. Smith for a part of the Spring term taught a class in Geography. During the latter part of termhe was obliged on account of sickness to give up the class. All of these persons showed a degree of interest and faithfulness in their work and of aptness for it which augurs well for their success should they make teaching their vocation. The progress of the students in their classes was very satisfactory. The work in Geography requires three terms—two in the preparatory department and one in the Normal course of study.

The C and B classes are of the same grade, students beginning the study of Geography in either of these classes as the hour of recitation may better suit their work in other departments. The C class takes up the study of North and South America. The B class of Europe, Asia, Africa and Australia, with special study of Illinois. The A class completes the whole work in one term and in addition to the thorough review pays a great deal of attention to methods of teaching.

The pupil who is studying Geography with a view to become a successful teacher of this branch must acquire a thorough knowledge of the subjects treated and also those more or less directly related to these, and must be able to present them in such a way that they shall be easily understood and so interesting that the childish as well as the maturer mind shall find pleasure in studying them.

Nor is it enough that he have such mastery of the facts of the text-book alone. he must have at his command facts and incidents in the history of the country his class is studying; items of interest in reference to its fauna and flora—the condition and habits of its people. He must also strive to keep himself informed of what is going on in the world, that he may always have something new to bring before his classes, so that his proficiency and interest may awaken in the minds of his pupils a zeal for knowledge that will endure after they have left the school-room and the teacher's care, and will keep them always learners.

Such teachers we are endeavoring to make of our pupils, and the thorough reviews, the thoughtful criticisms and comparison of different methods of teaching, with the practice in the latter which our "method" or teacher's classes give are found to be of very great benefit to our students when they go out from us to take charge of schools.

Map drawing is taught in all grades of our work, and is found to be one of the best means of impressing upon the memory the outlines of a country, course of rivers, locations of important places. It gives additional interest also, and very good work has been done by our students in this line.

In oral recitations the topical method is preferred, especially for advanced classes.

Physical Geography also forms a part of the work of this department. It is a study which never fails to awaken the interest; and its descriptions of the phenomena of the earth, its study of the laws which govern these, their causes, consequences and mutual relations lead the thoughtful mind to see how perfectly the Creator has adapted the earth for man's abode, and draw the thought "from Nature up to Nature's God." The students in my classes have derived much of both pleasure and profit from the reference library of the University, which they are encouraged to consult as a means of gaining fuller information on many topics connected with their lessons and also of forming the habit of reading carefully and retaining important facts thus acquired.

I have also had during the year part of the D Grammar, and in these classes I have attempted to lay a good foundation for knowledge of the English language and practically to teach my pupils "to speak and write it correctly."

Respectfully submitted,

E. C. FINLEY.

Department of Drawing and Penmanship.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University;

DEAR SIR:—I beg leave to submit the following report of work in this department for the school year 1880-81.

The number in classes this year is as follows:

	DRAWING.	PENMANSHIP.
Fall Term	59	111
Winter Term	27	103
Spring Term	34	84
Total	120	290

The following syllabus will give some idea of the work done in Drawing and its division by terms:

FIRST TERM.

Simplest Elements.

Lines and Geometrical forms.

Elements of symmetrical arrangement of forms.

Something of conventional and natural forms and elementary design.

Simple explanation of styles of Historical ornament are given and lessons in the principles of Free-hand object drawing.

SECOND TERM.

The drawing is both Free-hand and Instrumental. Lessons are given in connection with the copies in the leading styles of Historical Decorations; in Botanical analysis for purposes of Conventionalization and Design and in Model and Object drawing from both flat copy and actual model.

THIRD TERM.

Problems in Plane Geometry continued, also problems in Parallel and Angular Perspective.

Object and Free-hand drawing in light and shade. Figure drawing from copies and cast.

Botanical analysis from nature.

Applied design for common useful objects.

It will be seen that the work is comprehensive and progressive.

Five students complete the full course this year, and to show the work accomplished are required to finish six Diploma Drawings, consisting of:

1. An original black board and dictation exercise.
2. A sheet of Geometrical Problems.
3. An enlarged flat copy of Ornament.
4. An original design of Plant forms.
5. Perspective Problems.
6. Out-lines of objects.

To finish the course as here laid down, requires the full school year of patient, persevering effort; but when is taken into consideration the fact that *seven years* work in the public school is here condensed into *one* it ceases to be a matter of surprise that *one term* is not sufficient for its accomplishment. Our students sent out as teachers after this one year's drill, can go into any school, from the Primary to the High School Grades and do efficient and satisfactory work as teachers of Drawing.

A few words as to the importance of such a course: 1. Drawing as well as Writing is a means of expressing thought. We often hear urged as an excuse for not pursuing this important branch of study "want of talent," but as writing is not taught only to those who are to become authors so drawing is as necessary to those who are not destined to become artists.

2. The manufacturing interests of the country demand it.

3. The public taste will be improved by it.

4. Pupils will be better workmen, and so more profitable to themselves and their employers for having trained eyes and hands. It cultivates the understanding, the memory and the imagination. Not only do we become accurately acquainted with the *form* of what we draw, but the work of drawing sharpens our observation of forms we do not draw; thus drawing affords a knowledge of the material world. In addition we acquire the power of representing to others in a visible manner by a few lines, that which would often require a lengthy verbal description, and even then would be far less clearly understood.

The training of the sense of *beauty* is not to be over-looked. This introduces the pupil to that universal pleasure, that enjoyment, exclusively possessed by none, which is derived from the beautiful in nature and art, and must have its influence upon his general intellectual development.

Respectfully submitted,
JENNIE CANDEE.

Report of the Curator of the Museum.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University;

DEAR SIR:—I would respectfully submit the following report upon the work done in this department for the year 1880-81. Before entering into details upon the various points to which attention may be called, I would speak of the assistance some of students in natural history have rendered in several parts of the work. During the Fall term they did but little of such work further than what was desired by a few to learn how to put up and care for natural history specimens. In the Winter term Miss Lulu Van Winkle helped me some in labelling and arranging the cabinet of shells. During the Spring term Oscar S. Marshall spent from one to two hours a day for a couple of weeks or more in mounting plants for the herbarium. Wm. F. Hughes has assisted me on an average of an hour a day through the term in labelling and arranging insects, shells and alcohol specimens. While such assistance has been of value to the students in making them more familiar with the objects handled, it has also aided me in my work and my thanks are due to them for the same.

I might here mention a class of objects to be found in the museum that are not the property of the University, but are

SPECIMENS DEPOSITED

by the owners for various reasons. The first of these is a set of fossil teeth, evidently those of the Mammoth, owned by Mr. John Borger. They were found on his place south-west from the University while digging a well, at a depth of 22 feet below the surface. They are the plate teeth peculiar to the Elephant division of Proboscidæ, and though eight in number, being the whole number from one side of one jaw, they may possibly have formed two large teeth, one mature or fully out and the other only partially developed. Several things seem to point to such a conclusion. The state of preservation of about half of them is such as would seem to indicate that they were fully developed, containing but little animal matter and as a result are pretty well preserved. The other half seemed to have been less developed, containing a greater proportion of animal matter, and

they have not kept so well. In some instances the plates are now single and in others from two to four are united but in all cases they can be so arranged as to fit together as though they had formed two large teeth. It is a pity that the rest of the skeleton had not been hunted for when these were found.

Lieutenant H. T. Reed has deposited in the museum his valuable collection of Indian relics and curiosities. These are placed partly in the cases and partly hung about the room. This collection places within our reach specimens that, besides being of general interest to our students and visitors, also give such an insight to the habits and customs of the Indian portion of our population as can not well be obtained from mere descriptions or pictures.

Joseph G. Allyn has deposited a fine set of minerals from Ste. Genevieve, Mo. These were not deposited during the past year but at some previous time. They consist of fine specimens of the copper ores of that locality, including malachite and carbonate, with some large specimens of dog tooth spar coated with carbonate of copper. These are only a few of the many forms of minerals the valuable collection contains.

Archeology.

Under this head might be mentioned the arrow heads, scrapers and other implements of the industries and games of the mound builders, that have been in the museum for some time. A little has been added to this during the year, partly in form of arrow heads. Also a number of pieces of pottery and other things from the Smithsonian Institution, obtained through Dr. Cyrus Thomas. These seem to be modern forms of Indian utensils. They were very badly broken when received but I have put the pieces together so that they present a very good appearance.

Minerals and Fossils.

Some changes have been made in this part of the collection, partly by addition and partly in arranging and labelling the specimens. Among the collections made may be mentioned a quantity of Chester minerals and fossils made on our trip to that place, and nearly a complete set of Grand Tower minerals. To these should be added the specimens collected by Prof. Parkinson and his geology class, and some others mentioned in the list of contributions.

During the Fall and Winter terms considerable time was devoted to arranging and labelling the material of this part of our collection. In this I have been assisted by yourself and Prof. Parkinson, the latter continuing his work into the Spring term in re-labelling specimens that had been placed on blocks in the center case. Besides the extra work thus accomplished, the aid rendered was of

great value in giving proper locality and collector's name to many specimens, both of which were unknown to me, as well as the identification of some minerals. During the current year 1250 paste board boxes or trays have been obtained for the purpose of better arranging various kinds of small specimens. These are one inch deep by three inches wide and vary from one to six inches in length. All the smaller minerals and fossils have been put into these trays and placed in the east end of the south case, the fossils on the south side and the minerals on the north The larger fossils and a few of the smaller unnamed specimens occupy the most of the remaining space in this case both the upper and lower part. Most of the large and more showy minerals are to be found in the main part of the center case, while the smaller specimens, mostly ores, are placed on the two lower shelves of the upright center. Those in the main part are arranged in groups according to kinds, those deposited by Joseph G. Allyn being found in the western portion.

Birds, etc.

This part of the collection has increased a little during the year. In addition to the work done by myself, Prof. Parkinson has put up several specimens, among which is a fine Bald Eagle which is to be found in Prof. Brownlee's room. Among the others that may be mentioned are two Magpies and a Large Crested Jay from Colorado, sent in a fresh condition by Miss Sara Saul. Many of the hand specimens or "skins" intended for class use are the "worse for wear," but they are such as can readily be replaced; and the value of such a collection to be used in teaching zoology is much greater than the value of an occasional specimen destroyed. There have been a few specimens added to this part of the collection during the year.

The collection of birds' nests and eggs has been put in better shape. The nests, with part of the eggs, have been put in the two corner cases. The rest of the eggs are put into trays and placed in the east end of the north case.

Botany.

Our herbarium stands very near where it did last year. A few specimens were collected last season, and a part of those on hand have been mounted. Only one exchange has been made in plants since our last report, and that was with Dr. George Vasey, Botanist of the Department of Agriculture at Washington. The package received from him contained part European and part Californian. In return some of the rare plants of this locality were sent to him, one of which may prove to be a new species. I had intended to get all the plants on hand mounted this year so as to make several exchanges next year, but other work has claimed so much of my time

that my intentions have not been realized. From a mere estimate without counting I should think we have 2,500 different species.

Seeds and Fruits, etc.

As part of the botanical collection I made a beginning in a group of specimens that may be classed as above, The fruits that are too succulent to be well preserved dry are placed in alcohol, and are to be found on the west side of the north alcove. Others are placed in trays and occupy a place in the east end of the north case.

Neither of these methods seemed to be suitable for small seeds. To properly display these a quantity of small inverted show bottles of two sizes—ounce and ounce and a half—were obtained from Philadelphia. The seeds belonging to the institution have been put into these and they are placed on the shelves in the north alcove. Besides seeds collected in our locality, the collection contains some that I have had for several years, among which are about a hundred species from Russia. There are at the time of writing this 315 different species and varieties besides about fifty kinds not put into the bottles yet that have just been received from the Department of Agriculture, Washington, D. C. Among these are nearly all of our best marked varieties of grains. This part, it seems to me, will be valuable not only to the student in botany but to gardeners and farmers for the purpose of comparison. To secure uniformity and neatness of label for the bottles I have printed them instead of using a written label, each one containing first a common name, the second line the scientific name, and the last line the locality where grown.

The collection of woods is not arranged yet as I want to have it. Besides the "Lignarium" arranged on a black walnut back there are quite a number of species in blocks occupying a portion of the north shelves that I want during the coming year to label and put in better shape.

Conchology.

Considerable change has been made in this department during the year. Finding that the shells could not be so securely fastened to cards that they would not come off when handled in class use, a change was made in the plan of labelling them. The few already on cards were transferred to the small pasteboard trays already mentioned; and the balance of those on hand that were named, or I had any means of identifying, were disposed of in the same way. In addition to these I have during the year made three exchanges of insects of this locality for shells. By this means our shell cabinet is very much increased. The first of these was with Prof. E. T. Nelson, of Delaware, Ohio, from whom were obtained a little more than fifty species. Part of these were Ohio fresh water shells and the rest

were Atlantic coast marine forms. The second exchange was made with Prof. H. L. Osborn, of Middletown, Conn. From him were obtained a little more than fifty species; but the greater part of these were other kinds of marine invertebrates, something like a third being shells. The last was with Dr. L. G. Yates, of Centreville, Alameda, Co., Cal. This was the largest package, containing over 200 species and varieties, and was in some respects a very valuable collection. The number of specimens sent to represent a species was much larger than exchangers usually send. Besides this there were some very rare species, while some were represented by large and valuable shells. While they come to us from California and to some extent represent the mollusca of that State, the package contained species from several other States as well as other countries, as the following names taken at random from the different labels will show: California, Oregon, Germany, Saxony, Spain, Asia Minor, Chili, East Indies, Jamaica, Hayti, Bahamas, Azores, New Ireland, Ceram, Egmont Key, Fla., Washington, Ter., Balaeric Isles, Austria, Italy, Barbadoes, Hawaiian Isles, France, Mexico, North Pacific coast, Alaska, Switzerland.

These have all been labelled, and the whole collection is placed in the north case, the boxes when placed close together occupying about two-thirds of the case. They have been catalogued as they were labelled, but the only systematic arrangement made as yet is to separate them into univalves and bivalves. As might be expected in making several exchanges a few species would be duplicated, but such extra specimens can be used in future exchanges. The number of species we have now named, including well-marked, named varieties may be seen in the following table:

Univales, species	266	329 boxes
Bivalves "	129	163 "
Total	395	492

I can form but little estimate of the number of specimens, representing the above number of species as they vary all the way from one to more than a hundred, but know there must be several thousand. Besides the shells named there are quite a number of species which at present I have no means of identifying, but which will be worked up as soon as I can.

I am confident we can further increase our collection of shells by the system of exchange spoken of, as I have already made partial arrangements with several parties to exchange insects for shells next fall.

Alcohol Specimens.

About the first of January we received from Prof. S. A. Forbes, Curator of the State Museum of Natural History, a package contain-

ing fifty species of the fishes of Illinois, and two species of salt water fishes. Later in the season another package was received containing some more fishes, several species of reptiles and batrachians and a number of species of insects. As the last were pinned they will be spoken of under insects. In addition to the above, a part of the package received from Prof. Osborn, of Middletown, Conn., are of this class of specimens. These, with what have been collected here and have been donated by friends of the school constitute the additions to this department during the year. In order to properly care for these a few more bottles and jars were obtained from Whetall, Tatum & Co., Philadelphia, and additional shelves were placed in the alcove containing them last year. It may be stated, however, that the amount of shelving in that alcove is not sufficient to hold all the specimens we now have in bottles so that it is probable some new arrangements will have to be made for the reception of the surplus, and the new material that will be obtained the coming year.

Heretofore this class of material has been placed somewhat promiscuously together, but recently it has been separated into the groups, mammalia, reptilia, fishes, etc., each group having appropriate labels on the shelves to indicate its character. The alcohol specimens of fruits and the few anatomical specimens in jars are in the north alcove, the rest so far as it will hold them are in the south alcove.

Comparitive Anatomy.

There is a small amount of material that can be conveniently classed under this head, such as the hearts, eyes and other organs of various animals in alcohol, and skeletons and parts of skeletons of various vertebrates. Though not large this collection is valuable in teaching zoology as it serves to illustrate the structure and the difference in structure of the different groups of the higher animals. To these may be added a number of manufactured anatomical preparations such as the human ear and eye, showing their parts, the head and throat and chest showing not only the external structure but the internal parts. Part of this material has been added to our collection during the year, but the rest we have had longer.

Contributions.

Besides the additions that have been made to the museum by exchanges or by purchases and my own collecting, our friends, both here and at a distance from us, have donated many valuable things that may be properly spoken of under the above head. In thus acknowledging our indebtedness to the following persons for the specimens received from them during the year I would say substantially as I did a year ago that we are glad to get such things as have in this way

formed a part of our collection; and I hope our friends will continue to aid in building up here a good museum. I have endeavored to make the following list complete, but if there have been any things over-looked the omission has not been intentional:

Prof. A. C. Hillman, fruit of plant known as Apples of Sodom, Cyprus knees from Johnson Co. Pancratuim Rotatum.

Dr. S. B. Palmer, Syracuse, N. Y., part of a fertile pod of banana with seeds, from Brazil, near the Amazon river.

H. Teeter, Log Cock or Black Woodcock.

Prof. D. B. Parkinson, and the Geology Class, coal and salt specimens from DuQuoin.

Charles Prickett, minerals, etc. from Hot Springs, Ark., large cotton plants grown here.

Joseph G. Allyn, two Mallard ducks, a Wood or Summer duck, and specimen of White Flour corn from Ste. Genevieve, Mo.

Prof. J. Hull, a large beetle and some minerals from Madison, Wis., Lake Pepin, Minn., and from Scotland.

John Marten, fruit of Sweet Viburnum, some Grand Tower fossils and a number of insects.

John P. Stelle, Murphysboro, Great Siren.

August Stande, Okawville, a large pod from Galveston, Texas, and some plants for the herbarium.

George Ennisson, a number of insect larvae of various kinds, some perfect insects and an iron concretion.

Lieut. H. T. Reed, fire brick and sample of sewer pipe from St. Louis, copy of Declaration of Independence.

John C. Salter, Warden of Penitentiary at Chester, quite a number of valuable minerals and fossils from the prison grounds.

Augustus Cline, Papilio Philenor, minerals, furnace specimens and iron turnings.

Charles H. Roe, Pinkneyville, Bittern.

Eddie Sanders, Catocala Magdalena.

Captain T. J. Spencer, Ajo Caliente, Texas, string of roots used by Indian scout to convey information to Victorio.

Philip Fager, two boxes of insects from Desoto.

Sara Saul, Jamestown, Col., Steller's Jay, two Magpies, gold ore from Golden Age mine, and a box of Colorado insects.

Wm. Anderson, Murphysboro, coal fossils.

Hayden & Arnold, Union county marble.

J. F. Wiseman, Gorduis or Hair Worm.

George Rendleman, large Over Cup acorn.

W. G. Kilpatrick, Grand Tower, Shovel Nosed Sturgeon, Aligator Gar and a sample of unhulled rice.

Mrs. E. Robertson, cocoon from Black Walnut, Red Bat, White

Lined Sphinx, Sphinx Celeres, larva and Foxtrix larvae.

Richard Toney, Sparrow Hawk and Cray fish.

W. S. Thompson, St. Johns, sample of bromine made at the salt works, some salt specimens and iron ore.

John Herbert, Long Billed Curlew.

Alex. Morgan, Okawville, a young Aligator from St. Augustine, Florida.

George Graham, Polyphemus moth, a large spider and samples of wheat.

Brown & Winfrey, samples of corn, buckwheat and other seeds.

Major P. L. Ward, samples of corn.

Lizzie Unruh, some spiders, a snail, a myriapod and specimens of Styrax.

H. Rapp, samples of coke.

Hon. Daniel G. Allen, Providence, R. I., and Mrs. M. B. Bateman, East Greenwich, R. I., shells and other marine specimens from Naragansett Bay.

Mrs. H. D. Sayler. (*nee* A. M. Mulkey) Boulder, Col., a number of Colorado minerals and ores.

C. W. Williams, samples of corn and Indian relics.

John Borger, samples of pop corn for the seed collection.

Walter McElhaney, Bald Eagle.

Anna M. Schmerker, Indian arrow head.

Dixon Crucible Co., Jersey City, N. J., samples of graphite as taken from the ore previous to its preparation for lead pencils, and as prepared for lubricating machinery.

James Vick, Rochester, N. Y., sample of Russian White Oats.

Alex. Keown, five dollar bill of "Wild Cat" money.

Prof. D. B. Parkinson, specimens of Caoutchoue, quartz crystals from Hot Springs, Ark., and asphaltum from Salt Lake, Utah.

Rev. Albert E. Wells, Chester, a number of fossils.

Mrs Dr. Henry Lightfoot, relic from the foundation of the "Bender House," Kansas.

G. G. French, M. D., Rock Island, iron and clay nodule.

Mrs. Lou Mason, nuts of Carya Maxima.

A. J. Rapp, Centipede from Shreveport, Ala.

Mrs. Mather, slag from iron works at Mill Shoals, Ind.

Prof. Jas. H. Brownlee, petrified moss from mineral springs at St. Anthony's Falls.

Lydia Balcom, Screech Owl.

Henry Steinagel, skeleton of a mouse.

Dr. Day, Grand Tower, Indian arrow head, concretion and Stag Beetle horns.

Dr. Allyn, Soft Maple seeds, specimens of Pride of Heaven tree

from New Orleans, Sphinx Celeus, Tabanus Atratus, Calosoma Scrutator, Gymnetis Nitida and Chester fossils and minerals.

Jennie Clay, Cobden, Prionus Laticollis, Hypoprepia Fucosa and Europter.

Nellie Tierney, Pyrota Mylabrina, Ajax butterfly, Luna moth, Fabanus Atratus, Junonia Lavinia, Terias Nicippe, Orthosoma Cylindrica, Catocala Subnata.

C. A. Sheppard, Angeronia Crocataria, Philampelus Pandorus and Rose Galls.

James C. Brush, Saddle Back larva.

Fannie Goodman, Jonesboro, a large spider.

Samuel A. Jackson, Vienna, a double headed chicken and two snakes.

Prof. C. W. Jerome, Red Bat.

Lettie Crandall, tobacco worm.

Orcelia B. Hillman, larva of Imperial Moth.

Mr. Colier, larva of Imperial Moth.

Martha Buck, a Geometrid worm and a Iroctuid worm.

Frank Woodward, larva of Imperial Moth.

Eva Bryden, Buck moth larva.

George Brush, Euptoieta larva, Papilio Cruphontes and "Archegola."

Kate Ingersoll, larva of Acronyeta Oblenita, and of Eutrapela, Transversata.

Mrs. Ann Perry, larva of Turnus butterfly, of Royal Walnut moth and a large spider.

Heber Robarts, M. D., Club Tortoise Beetle.

Bertha Hull, double ear of corn.

Minnie Johnson, larva of Danais Archippus.

A. Caldwell, Eubule butterflies, several Catecalae, a zygaenid moth and the seeds and seed pod of tobacco.

Mr. J. Robertson, larvae of Papilio Cresphontes and of Sphinx Celeus.

Robert Lambert, a Limacodes larva.

D. F. Craigwell, Makanda, larva of Royal Walnut moth.

D. B. Fager, Abbott Sphinx larva.

R. G. Sylvester, a Bombylius fly.

George Moore, Spreading Adder.

Frank Gage, Corn Snake.

J. K. Miller, Sparta, a queen bee and sweet potato blossom.

James Robarts, M. D., almonds grown in Jackson county.

R. Tierney, larva of Leopard moth, Hyperchiria Io, Polyphemus cocoon, Utetheisa Bella, Catocala Walshii, C. Piatrix, Turnus and Comma butterflies, Cicada, etc.

H. G. Easterly, Sphinx Celeus and Bag Worms from cedars.

Thomas Brown, skeleton of rat's head and some leaves from Calcutta.

Mrs. Nancy Bernstein, larva of Royal Walnut moth.

Rena Clay, Cobden, Argynnis Diana and two moths.

T. Miller, Catocala Residua.

Eddie Foster, Utetheisa Bella.

Cora Williams, Bag Worms from cedars.

Katie McCarthy, Papilio Asterias larva.

Mrs. A. B. Parmelee, Hyperchiria Io larva and two Abbott Sphinx larvae.

George Perry, Sphinx Carolina.

Rockwell Bryden, Sphinx Celeus.

Lizzie M. Sheppard, large spider.

Jennie Nesbit, Eudamus Tityrus larva.

F. B. Anson, Irvington, quartz.

North & Campbell, Sphinx Celeus.

T. M. Williamson, Grand Tower, Polyphemus cocoon.

Osman Bryden, two Buck moth larvae.

A. Ackerman, Corydalis Cornuta.

B. J. Laughlin, White Heron.

Peter Harris, Cecropia larva.

Wallace Brown, Mole Cricket.

S. Hewett, Hooded Merganser, Banana.

Hester Perry, Tent Caterpillars.

E. A. McCracken, Shelby Co., a mounted Red Fox and fossil Favosites.

Arthur Patten, Cecropia moth.

Mattie Easterly, Ruby Throated Humming Bird.

C. C. Wright, Cobden, sample of Castoria or castor bean cake.

A. A. Parkinson, San Jose, Cal., several fine specimens of Star and Meanderin coral.

E. Sweep, Rosa Clare, stalactite crystals.

Edward Thomas, Indian arrow head.

Mrs. Henry Beaman, Cecropia moth.

Alice Krysher, Stag Horn beetle.

A. W. Campbell, Arctia Acraea and Corydalis Cornuta.

Arthur Snyder, Farina, Glass Snake.

Charles Lawrence, Corydalis Cornuta.

Prof. G. F. Foster, specimens of minerals and coal from New Brunswick, fossils from Michigan and algae.

Henry Ingersol, Indian spade.

Department of Agriculture, Washington, D. C., a quantity of plants for herbarium and about fifty kinds of seeds and grain for

seed collection, which is now the best and most valuable if not the only one in this part of the State.

Insects.

Considerable addition was made to our insect cabinet during the year, partly by collection of our home species, partly by exchange and a few by purchase, the last of O. T. Baron, Mendocino, Cal. During the year I collected and pinned 1,423 specimens besides a number of Lepidoptera that were not pinned but were put into papers. Such of these as were new to the collection were set aside for the cabinet, a few were used for analyzing in the classes, and of the rest such as were desired have been used in exchange for other insects, or as has been said before, for shells or other specimens. The following is a list of persons with whom exchanges has been made for insects and the character of the material received:

Adolph Conradi, Bethlehem, Pa., American and European insects.

J. Elwyn Bates, South Abington, Mass., American insects.

C. F. Goodhere, Webster, N. H., American insects.

A. H. Mundt, Fairbury, Ill., Samia Gloveri cocoons.

W. W. Hill, Albany, N. Y., European insects.

Besides the above, part of the last package from Prof. S. A. Forbes, of the State Mus. Nat. Hist., contained insects, and several parties have donated small quantities as will be seen by reference to the list of donations.

We have a comparatively small quantity of material unnamed, and that mostly in the orders in which we have no book with which to study our material. Mr. John Marten has worked up a few more of the Diptera during the year, but I think we should aid him by obtaining for the library a few foreign books upon that subject, without which but little more can be done. Recent additions to my own and to the University libraries will enable me to work up the material in the other orders very well, for the present at least. The cabinet contains the following number of named species and number of specimens, aside from a quantity of duplicates not in the regularly classified drawers:

Hymenopter	No. species	98	No. specimens	125
Lepidoptera	"	747	"	1330
Diptera	"	67	"	154
Coleoptera	"	810	"	1197
Hemiptera	"	84	"	96
Orthoptera	"	133	"	306
Neuroptera	"	15	"	35
Total		1954		3243

SYNOPSIS OF THE CATOCALÆ OF ILLINOIS.

In spite of the errors that were overlooked in getting up and printing the tables of butterflies and moths, the past two years' use of them in the class room as auxilliaries to the text book has confirmed me in the opinion I had at first that the preparation of such tables would be a great aid to our students. I intended this year to take up the whole family of Noctuidae so far as that family is to be found in our State but owing to my being unable to obtain necessary specimens or descriptions of some very rare species in season to make the work as complete as I desired, the arranging of tables for the whole family is deferred for a time. I have this year instead of the whole family taken the genus, Catocala, of which I have arranged tables of such species as have been found in Illinois. I have varied the form of arrangement a little in this and made the descriptions a little more full than in the former tables; and have also described under new varietal names a few distinctly marked forms that seem to be worthy of such names. In classification I have mostly followed Grotes Check List without regard to what my opinion might be as to the validity of some of the closely related species as my object is not one of criticism of any man's work but the preparation of such tables as will enable our students to identify such forms of our insects as are regarded by entomologists as species. As our cabinet becomes sufficiently full to enable me to do it I intend to take up other orders until the members of our Zoology classes will be able to identify any of our more common insects. Before going further I should make the following:

EXPLANATION. In all of the following descriptions I have supposed the specimens to be spread as they are usually prepared for the cabinet. In this position the costa of the fore wing is the front part and the part opposite the costa is the posterior or hind margin (sometimes called the inner margin), and the end of the wing the outer margin. The transverse half line at the base is called the basal line or the basal half line, that at about the first third of the distance from the basethe transverse anterior line, that at about two-thirds the distance from the base the transverse posterior line, and one outside of this nearer the end of the wing the subterminal line. The transverse lines are often abbreviated t. a. and t. p. lines. The space between the t. p. line and the subterminal line is often called the subterminal space. A kidney shaped spot near the middle of the wing is called the reniform and a more or less distinctly marked ring below this is called the subreniform. All but the last are common to nearly all of the Noctuidae but this is found only in the genus Cat-

ocala. The subreniform seems to be an inflexion of the t. p. line. Sometimes the inflected parts are united when the subreniform is said to be closed. There are also three more or less prominent dashes or streaks that are sometimes present, one at the base, the basal longitudinal dash, another formed by the heavily shaded inflexion of the t. p. line near the posterior margin that may be called the posterior dash and a third below the apex that may be called the subapical dash or streak. All the characters used in the following synopsis are taken from the upper side of the insect. The expanse is given in inches and decimals of an inch.

Characters of the Genus. Fore wings brown, or some tint of gray shaded with brown or black; hind wings uniform black, or black with a white band through the middle, or some shade of red or yellow with one or two black bands. On the under side the wings are banded with black and either white or the ground color of the hind wings. The antennae are filiform, simple; eyes naked; the posterior part of thorax with a more or less distinct transverse crest, sometimes dorsal tufts on the basal joints of the abdomen.

SYNOPSIS OF SPECIES.

A. Hind wings black.

a. Hind wings without white bands above.

b. Fringes of hind wings distinctly white, sometimes black at the ends of the veins.

* Fore wings without basal, posterior or subapical dashes.

1 Catocala Epione, *Westw.* Fore wings dark gray tinged with brown, reniform and a shade along the transverse lines distinct brown, subreniform pale. Expanse 2.25.

2 Catocala Sappho, *Streck.* Fore wings pale grayish white, reniform brown ringed with black which reaches to the costa making a prominent dark spot, two or three smaller dark spots on the costa. Expanse 2.30.

3 Catocala Lachrymosa, *Guen.* Fore wings bluish gray, sprinkled with black, a space on the hind margin including the t. a and t. p. lines pale, especially along the lines, subterminal space smoky brown. Expanse 3.00.

Var. Zelica, *French.* This bears the same relation to the regular form that var. Phalanga does to Palaeogama. The subterminal space deep brownish black, and a broad shade of the same inside of the t. a. line.

Var. Paulina, *Hy. Edw.* The whole fore wing suffused with deep brownish black with the exception of a space along the posteri-

or margin to the t. p. line, and the terminal space, which are the usual color.

Var. Evalina, *French*. The base of the wing to the t. a. line, the posterior part of the wing nearly to the middle, and the terminal space except a dash through the middle, suffused with deep brownish black. The rest of the wing of the usual bluish gray.

4 Catocala Viduata *Guen*. Fore wings pale gray, the transverse lines not prominent except along the costa, a prominent curved black shade from the middle of the costa to the end of the wing below the apex. Expanse 3.50.

5 Catocala Robinsoni, *Grote*. Fore wings pale gray, the transverse lines not very distinct, no curved subapical shade. Expanse 2.75.

* * Fore wings with basal, posterior and subapical dashes.

6 Catocala Desperata, *S.-A*. Fore wings pale bluish gray, the transverse lines accompanied with a brownish shade, a blackish shade connecting the basal and posterior dashes, and one curving from the subapical to the middle of the costa. Expanse 3.25.

7 Catocala Retecta *Grote*. Fore wings pale brownish gray marked much like the preceding only not so prominent. Expanse 2.75.

8 Catocala Flebilis, *Grote*. Fore wings bluish gray, a broad black shade, broken in the middle, extending from the base of the wing to below the apex. Expanse 2.50.

* * * Fore wings with posterior and subterminal dashes, the basal absent.

9 Catocala Dejecta, *Streck*. Marked a little like Desperata. Fore wings smooth bluish gray, t. a. line heavily shaded with black on its anterior half, subterminal space light brown, reniform slightly tinged with brown, posterior dash present but scarcely a trace of the subapical, t. a. and t. p. lines nearly united near posterior margin, pale outside the t. a. line, subreniform open. Expanse 3.00.

10 Catocala Ulalume, *Streck*. Fore wings pale bluish gray, transverse lines and shade quite prominent along the costa, rather indistinct elsewhere, very little brown along the transverse lines subreniform open, a pale space outside the t. a. line reaching across the discal cell, t. a. and t. p. lines the usual distance apart. Expanse 2.75.

bb. Fringes of hind wings gray, white sometimes at the apex.

11 Catocala Judith, *Streck*. Fore wings pale gray, lines indistinct. Expanse 2.00.

12 Catocala Obscura, *Streck*. Fore wings dark gray, a pale

subterminal line, usually a blackish subapical dash. Expanse 2.75.

bbb. Fringes of hind wings black.

13 Catocala Insolabilis, *Guen.* Fore wings pale gray, bluish in the center, suffused with black along the posterior margin, and somewhat clouded with the same in other parts of the wing. Expanse 3.00.

14 Catocala Residua, *Grote.* Fore wings gray, basal, posterior and subapical streaks or dashes present, transverse lines obscure. Expanse 2.75.

Var. Lucetta, *Hy. Edw. M.S.* A broad black shade, broken in the middle, extending from the base to below the apex.

15 Catocala Angusi, *Grote.* Fore wings gray, rather pale, a very slight bluish tinge, the posterior dash present though abbreviated. Expanse 2.75.

16 Catocala Simulatilis, *Grote.* Fore wings dark gray, a pale subterminal line, usually a subapical dash. Expanse 2.75.

NOTE. This is perhaps a variety of Obscura with darker fringes.

aa. A white band through the middle of hind wings.

17 Catocala Relicta, *Wlk.* Fore wings white with four black shades extending back from the costa, and two forward from the posterior margin. Expanse 3.00.

Var. Phrynia, *Hy. Edw.* Fore wings so universally dotted with black atoms as to give them a grayish appearance, the lines very distinct.

Var. Bianca, *Hy. Edw.* The base of the fore wings and a space between the t. p. and the submarginal lines always clouded with black, sometimes very heavily.

NOTE. I add these two varieties thinking they may possibly occur in the northern part of the State.

AA Hind wings magenta or rosy red, with two black bands.

a Fore wings gray, no longitudinal dashes or steaks.

b. Median band of hinds wings not reaching the inner margin.

18 Catocala Walshii, *Edw.* Fore wings uniform gray, shaded a little with brown, transverse lines dark brown, no black on the base of hind wings. Expanse 3.50.

19 Catocala Unijuga, *Wlk.* Fore wings uniform gray, lines black subterminal line white subreniform closed, base of hind wings a little smoky. Expanse 3.00.

bb. Median band of hind wings reaching inner margin.

20 Catocala Beaniana, *Grote.* Fore wings paler than in Briseis, the t. p. line more dentate, and the brown subterminal shade pal-

er, subreniform open, median band of hind wings broken near the inner margin. Expanse 2.75.

21 Catocala Briseis, *Edw.* Fore wings dark gray, lines black, subterminal shade pale brown, subreniform closed, base and inner margin of hind wings smoky. Expanse 2.75.

22 Catocala Concumbens, *Wlk.* Fore wings uniform pale drab, gray, the two transverse lines black. fine, zigzag, hind wings rosy base without black, median band wide. Expanse 2.75.

Var. Diana, *Hy. Edw.* A form in which the abdomen is bright rosy.

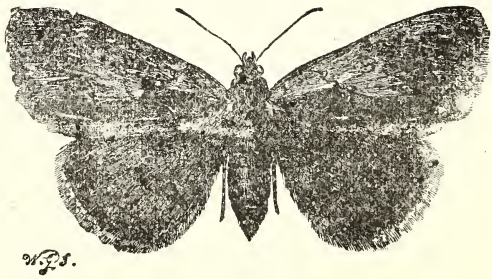
aa. Fore wings brown, or grayish brown, no gray longitudinal streaks.

23 Catocala Amatrix, *Hub.* Fore wings uniform dark grayish brown, oar little lighter with a broad broken shade of dark brown from the base to below the apex, base of hind wings without black. Expanse 3.50.

24 Catocala Cara, *Guen.* Fore wings rich deep brown, the lines black, indistinct except towards the costa, hind wings rosy red, blackish at base. Expanse 3.25.

Var. Silvia, *Hy. Edw,* The costal half of the fore wings largely blotched with yellowish white.

aaa. Fore wings brown with a gray streak or shade from the base outward, and along the costa.



CATOCALA ULTRONIA, Hub. (after Saunders.)

25 Catocala Ultronia, *Hub.* Fore wings dark brown, the middle of the wing and usually some along the costa at apex suffused with gray, usually in streaks a dark cloud below apex, hind wings blackish at base. Expanse 2.25.

Var. Adriana, *Hy. Edw,* Fore wings fawn drab, the lines distinct but the dark clouds towards the apex and along the posterior margin wanting, hind wings with median band narrow, no black at base.

Var. Celia, *Hy. Edw.* Hind wings with median band very narrow, sometimes reduced to a mere line, and never reaching the inner margin.

Var. Mopsa, *Hy. Edw.* The whole of the fore wing brown except the reniform, a basal streak and submarginal dentate line. These are whitish.

NOTE. As this is an exceeding variable species I add descriptions of all these varieties for possibly they may occur in the State.

aaaa. Fore wings gray with either basal, posterior or subapical dashes or shades.

26 Catocala Coccinata, *Grote.* Fore wings pale gray, lines black, reniform small, subreniform and a spot outside the middle of t. p. line light brown, the dashes usually connected with blackish shade, hind wings bright red. Expanse 2.25.

27 Catocala Parta, *Guen.* Fore wings pale gray, whitish in the center, the three dashes reduced to narrow lines, hind wings dull red no black at base. Expanse 3.00.

28 Catocala Marmorata, *Edw.* Fore wings pale gray, slightly shaded in places with brown, a prominent dark brown curved shade from the middle of the costa to below the apex. Expanse 3.50.

AAA Hind wings orange red at least the costal half, two black bands

29 Catocala Ilia, *Guen.* Fore wings dark gray, sometime blackish gray, with a white or light spot in the middle and the basal third of wing quite dark, or the whole wing evenly dark gray, the subreniform pale, no light patch at the apex. Expanse 3.00.

30 Catocala Innubens, *Guen.* Fore wings brown sprinkled with gray, a light patch at apex. Expanse 2.50.

Var. Flavidalis, *Grote.* Hind wings dark yellow instead of orange red.

Var. Hinda, *French.* The costal half of fore wings suffused with dark brown, the apical patch as usual, the subreniform and a small spot above it white, the posterior part of wing usually a little lighter than in the first form.

31 Catocala Scintillans *G.-R.* The whole of the fore wings rich blackish brown except the basal half of the posterior margin and the terminal space. Expanse 2.50.

NOTE. This is regarded as an extreme variety of Innubens.

AAAA Hind wings yellow.

a. Hind wings with two black bands.

b. Expanse two inches or more.

32 Catocala Delilah, *Streck.* Fore wings gray, shaded with

brown and sprinkled with dark brown scales, lines and basal dash dark brown, marginal band of hind wing deeply notched near anal angle. Expanse 2.25.

33 Catocala Cerogama, *Guen.* Fore wings light gray, slightly tinged with brown, lines black brown, obscure except near costa, the merest trace of basal dash, no others present; median band of hind wings expanded in the middle. Expanse 3.25.

34 Catocala Neogama, *Guen.* Fore wings gray, rather strongly shaded with brown, reniform and subterminal space distinct brown, the longitudinal dashes present but not very prominent, median band of hind wings somewhat moniliform. Expanse 3.00.

35 Catocala Subnata *Grote.* Fore wings pale gray, slight tinge of brown, paler outside the t. a. line to the subreniform, the longitudinal dashes if present very slight. Expanse 3.25.

36 Catocala Piatrix *Grote.* Fore wings dark brownish gray, the lines black, paler outside the t. a. line to the subreniform, hind wings dark yellow. Expanse 3.00.

37 Catocala Paleogama, *Guen.* Fore wings pale brownish gray, sprinkled with dark brown atoms, reniform, subreniform and subterminal space pale brown, lines black bordered with whitish near posterior margin, only the posterior dash present and that small, hind wings dark yellow. Sometimes the reniform is black, the lines faint; at others the posterior margin and terminal space are suffused with black brown. Expanse 2.75.

Var. Phalanga, *Grote.* Fore wings black brown inside the t. a. line almost to the base, and between the t. p. and subterminal lines.

38 Catocala Habilis, *Grote.* Fore wings pale drab gray, lines faint, about five transverse pale shades, very faint posterior dash. Expanse 2.25.

Var. Basalis, *Grote.* Differs from the typical form in the presence of a basal black ray or dash on the fore wings reaching to the t. a. line, the posterior dash more distinct; median band of hind wings a little broader than in the typical form. Expanse 2.35.

39 Catocala Nebulosa *Edw.* Fore wings rich dark brown, more or less of the outer two thirds suffused with grayish and buff, hind wings dark yellow. Expanse 3.00.

40 Catocala Muliercula *Grote.* Fore wings deep brown, shaded with bluish over the paler median space, lines black, a pale shade before the reniform; hind wings bright deep yellow, blackish at base. Expanse 2.25.

41 Catocala Consors, *S.-A.* Fore wings dark gray, sparsely

sprinkled with black atoms, lines black with brown shading, subterminal line pale gray, a black shade between subreniform and t. p. line, median band of hind wings somewhat moniliform. Expanse 2.50.

42 Catocala Serena, *Edw.* Fore wings gray, sprinkled with black, more profuse along the costa, lines black, fine; hind wings blackish at base, median band reaching inner margin. Expanse 2.25.

43 Catocala Amestris, *Streck.* Fore wings clear whitish gray, paler outside the t. a. line to the subreniform, lines black, the t. a. line running obliquely to opposite the subreniform with which it is connected with black scales, the black extending up the line to the costa; hind wings deep yellow, the median band not reaching the inner margin. Expanse 2.25.

NOTE. Judith, Delilah and Amestris have been named by Mr. Grote Levettei, Adoptiva and Anna. The only means I have of judging which has priority is by the dates of the papers in which the respective names occur. Mr. Strecker's paper bears date of August 1874, Mr. Grote's October 1874.

44 Catocala Westcottii, *Grote.* Fore wings similar to Amestris, hind wings pale yellow. Expanse 2.00.

45 Catocala Clintonii, *Grote.* Fore wings pale gray, darker in the terminal space and bluish on the reniform. lines black not very prominent, basal and posterior dashes present; marginal band of hind wings usually broken before anal angle. Expanse 2.00.

46 Catocala Ilecta, *Wlk.* Fore wings pale gray, only the fine black transverse lines present, hind wings clear light yellow, no black at base, median band not reaching inner margin. Expanse 2.50.

NOTE. This is Catocala Magdalena, Streck. Mr. Strecker writes me that he has ascertained by comparison of examples of Magdalena with the tyepe of Illecta in the British Museum that the two are identical. As Illecta is the older name Magdalena will be used as a synonym.

47 Catocala Nuptialis, *Wlk.* Fore wings uniform sombre gray, lines distinct only on the costa, reniform deep velvety black, median band of hind wings not reaching the inner margin. Expanse 2.00.

NOTE. I doubt this being found in the State.

bb. Expanse less than two inches.

* Median band of hind wings not recurrent, or turning before reaching the inner margin and running to the base.

48 Catocala Abbreviatella, *Grote.* Fore wings smooth pale gray, but little shaded, a little darker terminally, lines black, obliter-

ate except in the anterior part, reniform moderate, annulate, a black spot inferiorly, subterminal space faintly tinted with brown. Expanse 1.75.

49 Catocala Whitneyi *Dodge*. Fore wings greenish white, basal and terminal spaces a little dusky, reniform and a shade from this to the costa blackish, subterminal space brown; hind wings blackish at base, the median band not reaching inner margin. Expanse 1.75.
* * Median band of hind wings more or less distinctly recurrent.

50 Catocala Polygama, *Guen*. Fore wings dull olivaceous gray, shaded with brown inside the t. a. line and the subterminal space the same color, reniform slightly bluish, small basal and subapical dashes. Expanse 1.75.

51 Catocala Crataegi, *Saund*. Fore wings gray, suffused with brown, paler through the middle, dusky along the posterior margin, lines brown black, basal and posterior dashes present; marginal band of hind wings broken before anal angle. Expanse 1.60.

52 Catocala Amasia, *Wlk*. Fore wings white, the lines black, dusky shade inside the t. a. line, also from the reniform to costa, and less prominently so over the terminal space, subterminal shade brown, not reaching the costa. Expanse, 1.60.

53 Catocala Grynea, *Guen*. Fore wings nearly uniform dull olivaceous gray, brown along the posterior margin from near the base to the subterminal line. Expanse 1.75.

54 Catocala Fratercula, *G.-R*. Fore wings gray, suffused with brown, sometimes the terminal space pale, a dark brown curved shade from the middle of the costa to below the apex. Expanse 1.65.

Var. Atarah, *Streck*. Fore wings darker, the lines more distinct, dusky inside the t. a. line and along the posterior margin. the middle of the wing some paler. Expanse 1.75.

55 Catocala Minuta. *Edw*. Fore wings brownish gray lines not prominent, the subterminal white line broad at the costa. Expanse 1.50.

56 Catocala Gracilis, *Edw*. Fore wings uniform gray, densely sprinkled with brown scales, all the lines obscure except on the costa. Expanse 1.60.

aa. Hind wing with only one black band, broken before anal angle.

57 Catocala Amica, *Hub*. Fore wings light gray, sometimes a brown curved shade from the middle of costa below the apex. Expanse 1.50.

58 Catocala Lineella *Grote*. Fore wings whitish heavily suffus-

ed with black and sprinkled a little with brown, lines black. Expanse 1.50.

CAPTURING CATOCALAE.

There are two methods usually adopted of catching these insects, one known as "sugaring" and the other as "whipping." By either of these methods a large mouth poison bottle is necessary for the purpose of catching and killing, and some kind of receptacle for storing after they are dead. Another poison bottle is often used for the latter but it is objectionable as the dead insects rub against each other and partially denude some portion which lessens the beauty of the specimens. After the insects are dead they are sometimes pinned and put into cigar boxes having cork in the bottom. An objection to this is if they are not spread soon after being taken they become too stiff to spread without relaxing. A tin box with a cyanide cake in the bottom and cork round the sides answers the purpose well. It should have a lid attached by hinges and a handle in the top for carrying. One 6 by 8 inches by 5 inches deep will hold thirty specimens pinned with room on the cake where a number more may be laid. These can be left in the box for twelve or twenty-four hours without danger of drying.

In sugaring, a mixture of stale ale or beer with cheap sugar or molasses or some similar preparation is painted on a number of trees, posts or other convenient objects at dusk. These places should be visited once in from fifteen to twenty minutes during the evening with a lantern, a dark lantern or "bull's eye" being best. Whatever insects are found feeding on the preparation placed on the trees can be taken by placing the wide mouth poison bottle over them. As the sugar mixture dries it should be renewed as long at least as it is desirable to continue catching. Not only Catocalae but many other kinds of insects can be taken in this way. Warm dark nights with the wind in the south will be most favorable for sugaring.

Capturing by whipping is done in the day time instead of at night. To be successful it is usually best to select a thick piece of woods in a low place, along some stream or some place where there are ledges of rocks, in caves or under bridges. A few may be taken at any time during the proper season (from June to September) but the best time will be found to be from two o'clock to four in the afternoon with the wind south or southwest. At such times they may be found on the trunks of trees near the ground, about rocks, etc. If such places be examined the insects may often be seen and captured without disturbing, but if not seen the tree or rock may be struck

with a small switch when they will fly up. By watching to see where they alight they may be approached and taken with the bottle. Some species seldom fly further than the opposite side of the same tree, while others start easily and often fly to some distance. These to be taken must be approached cautiously. At the time mentioned above most species will be found on the north or east side of trees away from the sun and wind.

I find it advantageous to use both of these methods, not alone for the other insects that may be taken at sugar that I would not find by other means. I have taken a few rare species at sugar that I have not found in the day time, and also a few in the day time that I have not found at sugar.

Corrigenda.

While the whole Principal's Report is going through the press I take the opportunity to make the following corrections in my synopsis:

No. 3. For Var. Evalina read Evelina.

No. 12. To this should be added between dash and expanse—t. p. line nearly straight across the wing with a series of fine teeth.

No. 14. This description applies to a form of Angusi. The description should read—Fore wings dusky or smoky gray with a pale gray subterminal shade.

Var. Lucetta is a variety of Angusi instead of Residua.

No. 16. To this should be added between dash and expanse—t. p. line more as in Residua and other species with two very prominent teeth and wide open subreniform. This species should be placed after No. 12 as the fringes are grayish white.

No. 17. For Var. Binaca read Bianca.

No. 24. After Var. Silvia should be added Var. Carissima, Hulst. The costal half of fore wings largely blotched with greenish yellow.

No. 49. The color of fore wings should have been light gray. The base is not dusky below the submedian vein.

Respectfully Submitted,

G. H. FRENCH, Curator.

Department of Military Science and Tactics.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University;

SIR:—I have the honor to submit this my first annual report for the collegiate year ending May 26, 1881.

In compliance with orders from the War Department, Washington, D. C., I reported for duty at this Institution, and on September 6, 1880, assumed charge of the Military Department. I regret to say that at the beginning of the year the military was not a popular department with either the Faculty or students, and as all male students were not then required to take the military course, they were slow to volunteer, enrollments being made in the Fall term as late as December 3rd. The Winter and Spring terms opened more favorably, and nearly all of the enrollments were made on the first few days of these terms. As soon as practicable I organized the cadets into a battalion of four companies, which I designated as the *Douglas Corps Cadets*, in honor of the late Hon. Stephen A. Douglas. I also prescribed a neat but inexpensive uniform of cadet gray for the cadets; about thirty-five of them provided themselves with it, and from this number I selected officers of the battalion.

The accompanying table has been prepared to show at a glance the status and work of the department for the year:

NUMBER OF CADETS.

1880-1881.	JOINED.				INSTR'D.			DRILLED.								
	With no previous military instruction	Not instructed by Lieut. Reed	Instructed by Lieut. Reed	Total	For only one term	For only two terms	For the year	Members of the Senior Class	Dropped	Punished	Performed Court-Martial duty	Recited in Upton's Tactics	At Target Practice	In Reed's Signal Tactics	In U. S. Artillery Tactics	In Upton's Inf. Tactics
In Fall Term	68	32	0	100	24	36	40	3	6	3	10	0	46	19	46	100
In Winter Term	31	2	74	107	18	48	40	2	15	1	0	17	0	0	14	107
In Spring Term	27	5	55	87	33	14	40	4	21	4	9	0	12	4	33	87
During the year	126	39	129	165	75	50	40	5	32	8	16	17	56	20	70	165

The hour allotted for daily military exercises has been devoted to drills and weekly dress parades of Infantry, with occassional lectures upon military subjects, while drills in Artilery, Target Practice, instruction in military Signaling and Courts-Martial, and recitations in Upton's Infantry Tactics were generally had after school hours. The Cadets as a whole have shown aptitude for drill, and while the discipline has not been perfect it has improved very considerably.the cadet officers doing much to elevate the standard. The uniformed cadets have participated in several public celebrations, and have never failed to elecit commendation for their good marching and soldierly bearing, and I am happy to state that I have reasons to believe the cadets of the Douglas Corps have the good will of the citizens of Carbondale and the hearty support of the Trustees and Faculty of the University. The position of Chaplain was tendered the Rev. J. J. W. Place of the Baptist church in this city, and he having accepted, his appointment was announced to the corps.

Cadet Thomas S. Marshall, 1st Lieutenant and Adjutant of the Douglas Corps Cadets, who graduates at the head of his class, has performed the various military duties assigned him in a very efficient manner, and having been in the military department of this institution for nearly three years I take pleasure in commending him as worthy of a cadetship at West Point.

In accordance with the precedent established by the Governor of Illinois, I respectfully recommend the following named four cadets of the graduating class, for honorary appointments as Captains on the Governor's Staff—viz:

1. Thomas S. Marshall. 2. Henry W. Karraker. 3. John W. Lorenz. 4. William F. Hughes.

I respectfully suggest the propriety of asking the Legislature to appropriate $50,000 for an armory and improvement of the campus, in order that the Military Department at this Institution may compare favorably with that at the Illinois Industrial University at Champaign.

In conclusion I respectfully recommend that the grass on the drill ground may be kept short and the ground made more even; that a competent man be employed occasionally to clean the rifles and accoutrements; that the gun carriages be repainted and that suitable shelter be provided for the two sections of artillery used by the cadets

Very Respectfully Your Obedient Servant,

H. T. REED,

Lieut., U. S. A., Prof. Mil. Science and Tactics.

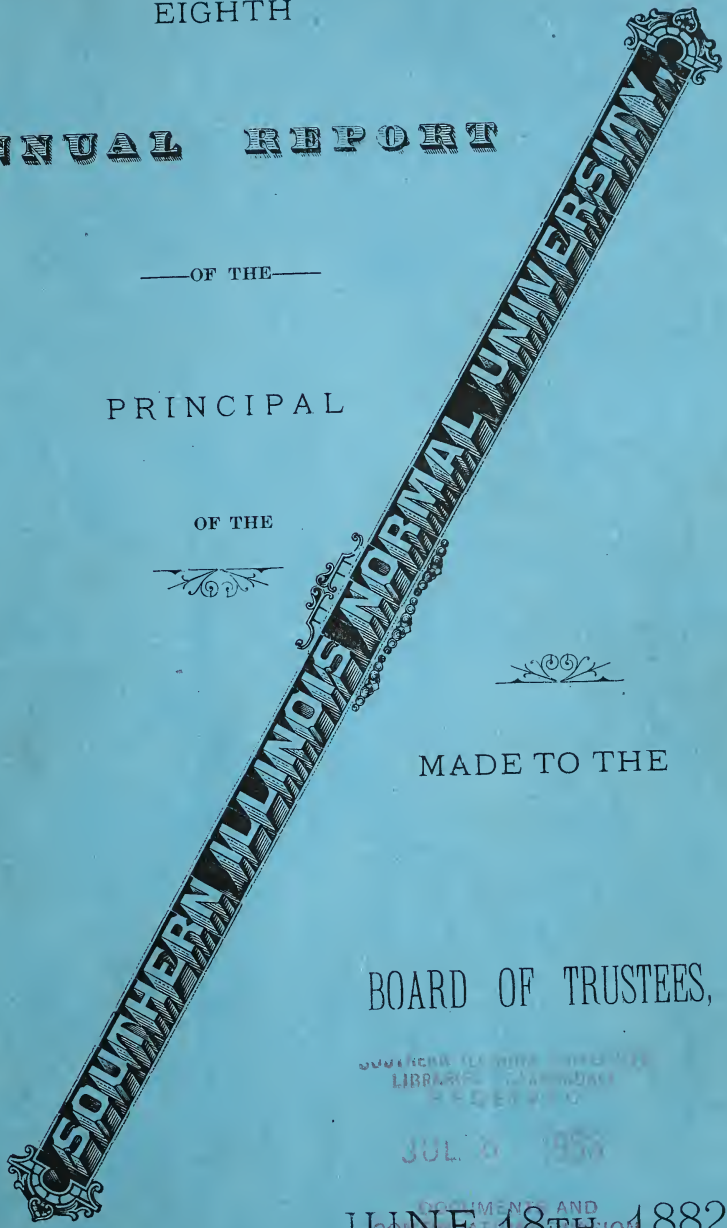
EIGHTH

ANNUAL REPORT

—OF THE—

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ANNUAL REPORT

OF THE

PRINCIPAL OF THE

SOUTHERN ILLINOIS NORMAL UNIVERSITY,

MADE TO THE BOARD OF TRUSTEES,

JUNE 13, 1882.

To the Trustees of the Southern Illinois Normal University:

GENTLEMEN: I have the honor to make the Eighth Annual Report of the Principal of the Faculty in charge of the Normal University, placed under your care by the State of Illinois. The tokens of increased confidence shown by the people toward our school have been frequent, and in many respects, flattering. First of all, there has been an increased attendance in the higher grades of the Normal Department. Nearly twice as many young men and young women, holding First Grade Certificates, have come to us and entered on that special kind of work which is to prepare them for a life profession of teaching. This fact gives us great encouragement. It shows that our work of educating teachers is better appreciated by directors and by parents ; and more particularly by those who are desirous to obtain the best qualifications for that most delicate and difficult of all the operations of skilled labor, the mental and moral instruction and training of the young. And it also proves that the community is coming to see that the patient, unpretentious and efficient work of teachers is the most valuable contribution made to the prosperity and virtue of a nation. It further encourages us to believe that there is a greatly increased demand for well educated, modest and conscientious instructors of youth for our public schools, and these young people come to us to prepare to meet that demand.

A second fact cheering to us is, that notwithstanding the short crops in our almost exclusively agricultural region, the total num-

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ber of pupils has substantially increased. Time enough has elapsed since our university began, for any novelty or local excitement to wear away, and for feelings of hostility to develop themselves, and cause reaction from the first popularity and hopefulness raised by the State aid, to increase the educational facilities of this part of the commonwealth. Yet that we have not only held our own, but made a creditable advance, and of the higher classes of pupils too, is a matter of genuine congratulation.

But a better foundation for pride, if possible, than either of these, has been the added fact, that many applications for teachers, whom we can heartily recommend, have come to us from directors and boards of education, more than enough, indeed, to take up all our graduates and the higher class of our students. These letters asking for good teachers, have been received from Kentucky, Tennessee, Missouri, Kansas, Iowa and from our own State. Most of the schools in our own State were supplied with candidates, and several, who were employed on our simple certificate of qualifications and character, have given, as we have been informed, complete satisfaction. In fact, these applications for better trained teachers, are so frequent and urgent, as often to diminish our higher classes. The present term we have found it very difficult to retain in our school some to whom offers of schools next year have been made so tempting, as almost to compel us to advise them to go out and teach, trusting to a future time to finish the course of study. Every class which approaches graduation, is more or less depleted by this demand of the people or directors, for teachers somewhat better educated than the majority, but not yet having gone through a regular Normal course. It is a temptation to a young man or young woman to be offered a good situation as teacher at higher wages than the average, though the sum is really small, but which will, nevertheless, afford a comparative independence instead of the sacrifices to be made to continue at school another year or two, and perhaps incur a debt, and have the prospect of losing that particular position the next year if it is not accepted now; and not a little courage is needed to resist the allurement and remain to study and improve with a remote prospect of a place when the graduation shall come.

We also find County Superintendents offering to accept our certificates of study and recommendations, and now and then, one is willing to grant second grade certificates in his respective county on work done and examined by us. While all this is complimentary to us, and is, we believe, allowable by the law, permitting the County Superintendents to examine by proxy or by one appointed to make the examination and while it tends to make attendance in our schools very valuable to our pupils, it really has one element of doubtful propriety, since it may discriminate against those who could not attend a Normal School. And it may annoy us to be compelled as we sometimes are, to deny to a worthy student and possibly a personal favorite of some one of our teachers, a commendation, which should entitle him to a certificate. There is an impersonality about a county superintendent which

cannot be expected to be found in a teacher. The first should really know no individual; the second should indentify himself closely with his scholar by sympathy and interest, so as almost to preclude the idea of impartiality. Hence the public will almost by an instinct of nature, be a trifle suspicious that certificates based on examinations made by a teacher of a particular student, will always have about it an odor of charity which may cover many sins of omission or negligence. Do we not find this suspicion gathering itself like a mist about some of the certificates granted by a County Superintendent who issues them to the attendants at County Institutes conducted by himself for the purpose of helping out his too meager salary?

But such suspicions ought not to lie against any papers we may give as teachers to pupils as simple recommendations for faithfulness in duty and correctness in deportment. These are well understood to be mere introductions to public favor, and not in any sense as licences to discharge the duties of an office and receive its emoluments. A diploma from our school ought very properly to count for something in the estimation of the public, but in our State it does not amount to a licence permitting the public to employ the person bearing it as a teacher of youth. I have no hesitation in saying that no harm seems to me likely to grow out of giving it such authority. This would in fact add to our idea of duty an increased responsibility, and would tend to give us more caution in allowing students to graduate, unless in our opinion, they were by nature as well as by education, clearly adapted to the work of the teacher. As it now is, we are constantly tempted to do exactly what we do not always approve, and give commendations of doubtful value.

While some of these things perplex us they also give us hope that the time is surely approaching when we shall find our halls so crowded that we shall be obliged to make a more rigid examination of candidates for admission, and to accept only those who have been fully prepared at the graded schools taught in the cities and at the ungraded ones of the towns, into many of which our graduates and students shall have introduced better methods. At present we do receive some students who ought to be in lower schools—not because they do not receive excellent instruction with us, but because they would be an advantage to the home schools, and would cost less to their parents if educated there. We do, however, receive them, partly because the law, possibly loosely drawn at first, encourages them to come to us; and while there are places for them in our building, we can hardly refuse them admission, especially if they are sent, as many of them are, by properly attested appointments, or bear suitable recommendations; and partly because we find that they are not likely to be as well taught in the schools they would attend as they will be in ours. For an example we find that children of twelve or thirteen and sometimes as young as ten or twelve with us, do learn to spell so much more readily and accurately, that by the time they are fourteen they are able to lay that business aside and attend to other things,

while the young people coming to us from the town and ungraded schools at eighteen or twenty, are still quite unpracticed in that sign of civilized culture. We find it the same in arithmetic, in which branch we can save to a child at least a year of precious time. The case is stronger with grammar, and as strong, if not possibly stronger, with geography. While in writing and drawing there is really no comparison. There are places, as in Carbondale and a few other cities, where the deficiencies alluded to are not felt. In these places no necessity arises for parents to send to us. We do not intend to compete with the schools in cases like these. But cannot, with show of reason, refuse to receive such as are sent to us when we have classes suited to the exact wants of such pupils, and when the act incorporating the University encourages it.

Besides their presence is valuable to us, as it compels our teachers to keep themselves in sympathy with that part of the work of the public schools, which is really most important of all, the primary, and also affords to our Normal students the best opportunities for observation and practice teaching. We can form classes of the younger and less advanced scholars, and thus we can give our students who are seeking to prepare themselves for teaching, opportunities in experimental classes to see the best methods in use. These classes are equivalent to Clinics in the Medical schools. A pupil of our Pedagogic classes learns in these classes of primary work, how the skilled teacher can ask questions which shall cover the book lesson completely, and apply it too, or suplement or extend it, or even criticise and guard against any tendency to error it may contain. He learns a practical lesson by a sort of unconscious activity of his own mind, which profits him more than any reading, and knows how inattention may be indirectly rebuked without disturbing the thought of the class, or interrupting the easy progress of the work ; how a careless preparation by a pupil may be exposed to the pupil's own mind without a discouraging rebuke or a freezing expostulation, which shall hurt others more than the lazy one ; how industry may be applauded by the eye and manner ; how brilliancy may be acknowledged and mere smartness and flippancy may be awed into modesty. These lessons are in the nature of experience, guided by reason and example, and are far more beneficial than solitary practice in a school room ; for in this plan the scholar marks imitates the best teacher who is working at his best under the best surroundings. He may also learn how to repress incipient disorder, and check rising impertinence before they have really become disturbing elements ; and how a disposition to fritter away time in a recitation by frivolous questions may be discovered and removed without allowing it to grow into an abuse. In short, the scholar of pedagogics, as in our training classes, may by these modes of observation be impressed with the fact that hearing recitations is not a teacher's whole duty, and in short, may come to feel, to see and to know by the surest of all methods of learning, by a common and valuable absorption, perhaps it may be called, how great an art is the quiet, unobtrusive control of a master mind, and how it

will raise all around it by its compelling influence.

It is therefore a matter of congratulation and advantage to our school, especially to our students in the training department, to have so many of this class of quite elementary pupils, and it is also a benefit to them, and most of them receive a greater profit than they could have had elsewhere, or in ungraded schools at home.

There has also been a small addition of students in our middle grades and also those who come to us for the purpose of obtaining culture, or making a preparation for future study or a profession. Such pay tuition as the law prescribes and receive an education and training without taking any pledge to teach. Whenever the two classes named before—those seeking a strictly technical training, and those in elementary branches who serve as model classes—come in numbers sufficient to crowd our building it will be our aim to discourage the attendance of this class. At present they do not in the least interfere with our technical or professional work, and many of them after being in our University and breathing the inspiring spirit of our corps of teachers and professional students, become imbued with the same spirit and conclude to enter the school room to teach. Some—as will some graduates of our colleges—will teach only temporarily while on the road to another profession. But, by our course of study and our daily thought, all of these will be made better teachers, even for the short time they will be engaged, than they would have been; and when they cease to teach and become citizens they will better appreciate and promote the grand educational work of the age and will better discharge all their duties to the State, as members of boards of education, directors and other school officers.

There is one question to be raised here concerning the price of tuition to be paid by this class of scholars. It has been put very low: $14 per year in the Preparatory Department and $21 in the Normal. But this is lower than even in very cheap schools and private establishments. And it is below the actual cost to the State, which varies from about $31 to nearly $50. These figures are less than in most other Normal schools, as scarcely one of them charges less than $30 and many are as high as $75 a year. The Act of the Legislature, making appropriation to carry on this University, provides that the cost of the Model and High School shall be paid from the tuition collected. Now this is the point of this inquiry: Does not the spirit of the law require a price of tuition, on the average, nearly or quite equal to this cost? It is true that we do not have the Model and High School in names, and we have properly no such schools in practice; but it does seem that while we charge tuition fees to any, these fees ought to be somewhat near to the cost of the education to the State. At the State Normal University in McLean County the fees are $30 a year for the High School while the Training Department receives the very small pupils who compose it and give them gratuitous instruction.

Facts like what are cited above have been stated both for the information of the people and the satisfaction of this Board of Trustees. It is your privilege to know how the institution is prospering and what are the hopes of its continued usefulness, in order that you may give a rational account to the Governor of the State and to the General Assembly of what it is doing, and how its work is appreciated by the public, and that you may not be disheartened by any criticism which may be made concerning the numbers of our pupils or any other matter of interest connected with it.

The old question still haunts us, "Do the Normal Graduates and Students teach?" We can show that they do and more than enough to make up the full number of months or days which could be required by any fair interpretation of the laws of the State. In our late Report to the Superintendent of Public Instruction it was shown by facts, that so far in our history, with so few graduates, and in such a time when the demand for young men in business and young women for wives, is so constant and imperative, the students who go away from us have taught a third more than the actual requirements of the law, and vastly better than they could have done without our instructions. During the year now last past the proportion has increased rather than diminished. We have had since our inauguration 1693 students enrolled in all the departments; 76 of these were in a Model or Primary School not now in operation. Of this number 913 have been employed as teachers in the public schools, subsequent to their attendance here. About 675 have paid the tuition charged to them, and 407 have been in the school the current year. Putting these figures together properly and they will show at least 302 who have taught above the demands of the law. And when the fact of the growing demand for teachers is taken into account we must infer either that the people believe it pays to hire a Normal Student for a teacher, or that nearly the whole public with the most intelligent school officers is deceived.

It is believed that every interest of the school has prospered during the year. The Library has been largely increased by the liberal appropriation made for it by the General Assembly, and the addition to it of many valuable books has made it more useful to the pupils and to the teachers. During our last summer vacation the Principal was in the East and improved the opportunity afforded to purchase many necessary works of reference, science, history and literature. While it really needs an appropriation larger than last year to give us all we need, it is now excellent, and is especially rich in works on pedagogics, in which line it probably excells any library in the land, and certainly any one west of the Alleghanies. The whole faculty have made it a business and a pride to sacrifice much each year that this means of improvement may be annually increased. For the eight years of the life of the school they have labored on less salaries than men in the same grades of professional work in other similar institutions, and the difference has each year gone toward improvements in the

means of instruction and very largely to the building up the library. They have the substantial satisfaction of knowing that their sacrifices have contributed to the facilities for the growth and culture of mind in the Southern section of the State, which is thus enabled to enjoy the benefits of a most excellent working library.

The apparatus has been increased by many additions which need not be enumerated here. It is enough to say that every branch of Physical and Chemical Science can be fully illustrated, and in as ample a manner as in many of the best universities in the land. Particularly are our facilities for Chemical analysis valuable, and they enable any student to receive the best of instruction in this department of practical research.

To the Cabinets and Museum many specimens of great interest have been added by the Curator and by the Principal, and by purchase. Professor French has collected and preserved large numbers of insects, shells, birds, fishes, etc., and has received from Professor S. A. Forbes of the State Laboratory specimens of value, and Professor Parkinson has done very much to arrange and increase the department of Geology and Mineralogy. Both Library and Museum require larger accommodations of shelves and cases, and should have additional appropriations from the State.

Many slight improvements have been made about the building, and several others are greatly desired. Some considerable work of pointing joints in the stones around windows and cornices should be done. The steam heating apparatus should be thoroughly examined by an expert. Some new cases should be put in the Museum and new shelves in the library. It would be very advisable to make better accommodations for the Department of Drawing. It is suggested that Rooms No. 11 and 12 could be thrown into one, and a small room taken off the south end of 12 so as to accommodate both the teacher and the classes with more blackboards and better opportunities for study and practice.

It will be seen that the appropriation for Fuel made by the General Assembly has been insufficient for the last two years, the deficiency being about $150 a year. The sum for this item cannot be diminished, and it ought to be equal to about $1,000. The other items of the appropriation are ample for the purposes, as the institution is conducted though every one of them might be increased, and the State would profit thereby. In several of them there is now a small balance unexpended, which was left by calculation, as we shall need to make some purchases of larger apparatus and make improvements during the coming year.

It has been deemed advisable, after quite mature deliberation, to institute a more radical and complete examination for the candidates for graduation and an account of the plan which has the sanction of the Superintendent of Public Instruction, is inserted in the catalogue. We call your attention to its provisions and invite your concurrence ; and ask authority for the Faculty to appoint a Committee of Examination to consist of County Superintendents and teachers who shall be graduates of Normal Schools, whose duty it shall

be to examine and grade the papers written by the students, and to recommend what in their judgment shall be just to do in case of each candidate.

The Principal believes that every teacher has been faithful in work and wise in method, and each one is undoubtedly better qualified for his particular duty during another year than ever before. There has been little to produce friction between students and teachers, and among the students there has been so general a disposition to attend strictly to business and obey the regulations of the Trustees, that there has been little occasion for discipline and reproof. Indeed so devotedly have these given themselves to study that temptations to school mischief have been rare, and scarcely have they been at all reproved.

We are grateful for your continued kindness, and offer our sincere thanksgiving to the Father of all for His mercy which has kept us in health, and which has crowned the year with blessings.

The following young women and young men have completed Classic English and the Pedagogic Courses of Study as prescribed by your By-Laws, and having maintained a good character, are unanimously recommended by the Faculty as candidates for Diplomas, as follows, viz. :

For the Classic and Pedagogic.—Adella Brownlow Goodall.

For the Classic. — Walter Jay Ennisson, Henry Alexander Stewart.

For the English and Latin.—Arthur Eugene Parkinson.

For the English.—Wezette Atkins, Lizzie Mary Dierdorff, Alice Krysher, Albert Edward Mead, John W. Wood.

We recommend that the Principal be instructed to confer these Diplomas on the day of the Annual Commencement.

With sincere respect, we remain your obedient servants, the Faculty by

ROBERT ALLYN,
Principal.

DEPARTMENT OF LATIN AND GREEK.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University.

DEAR SIR:—I have the honor herewith to present a statement of the classes and the work of this department during the scholastic year 1881—82:

In the Fall term the classes under my charge were as follows, viz: Greek Rudiments, eight members; Latin Elements, Section A, thirteen members; the Æneid of Virgil and Latin Grammar, nine members; Cæsar's Commentaries on the Gallic War and Latin Grammar, ten members; Anabasis and Greek Grammar, four members; Latin Elements, Section B, sixteen members.

During the Winter term my classes advanced as follows, viz: The class in the Rudiments of Greek advanced to exercises in the translation of Fables, Anecdotes, Jests, Grecian Mythology, etc.; Latin Elements, Section A, advanced to Latin Reader and Grammar; the Virgil class read the Orations of Cicero; class in Cæsar's Commentaries advanced to Sallust's Catiline and continued the Latin Grammar; class in Anabasis passed to the Memorabilia of Socrates and continued the Greek Grammar; the class in Latin Elements advanced to Latin Reader and Grammar.

During the third term, and at this writing, the classes in this department are pursuing the studies of Xenophon's Anabasis and Greek Grammar, Roman History, Section A, and Latin Grammar, *Tacitus de Germania,* Sallust's Catiline and Latin Grammar, Homer's Iliad, Roman History, Section B, and Latin Grammar.

During all the year I have also had charge of one division of Section D, in Orthography, composed of thirty-two members. It affords me pleasure to state that Miss M. Lily Houts, Henry A. Stewart, Richard T. Lightfoot and William J. Eddy have rendered very valuable assistance in correcting the spelling. I am also indebted to Miss Esther C. Finley for services rendered in hearing the recitations for a few weeks of two students in Rudiments of Latin at an hour that they could not be accommodated in my own classes.

It appears from the above that there have been nineteen classes in this department during the scholastic year, comprising in the aggregate over two hundred and fifty students. Most of the pupils have been prompt and faithful, and deserve great praise. A few from irregular attendance and a want of disposition to improve opportunities, will fail to carry their work. The grades in most cases have been highly satisfactory.

The classical course embraces three years of the Latin, and two years of the Greek. Three students this year will complete the full classical course, and six will in like manner finish the entire Latin course.

Added to my duties of the school and recitation room, I have performed the labors of the Registrar of the Institution. These at times have been multifarious and onerous. I have carefully enrolled each term the names of all students who have entered during the year, have collected all incidental and tuition fees and, on receipt, have transferred the same to the Treasurer of the University; have transcribed the minutes of the Board of Trustees into the general record book; have placed on file all original bills; have prepared all vouchers, as the law directs, in duplicate, for current expenditure; have issued money orders on the Treasurer for the payment of all bills of indebtedness, and have kept a faithful account of amounts received and paid out; and I have performed such other duties as pertain to the office of the Registrar of the Institution.

Respectfully submitted,

CHARLES W. JEROME.

IV. DEPARTMENT OF HIGHER MATHEMATICS AND PRACTICAL PEDAGOGICS—1881-82.

ROBERT ALLYN, LL. D.,
Principal Southern Illinois University.

DEAR SIR :—The following table gives the usual work in my department, by terms, for the school year :

HOUR.	FALL TERM.	WINTER TERM.	SPRING TERM.
1	Analytic Geometry.	Differental Calculus.	Intregal Calculus.
2	C Algebra.	B Algebra.	A Algebra.
3	C Prac. Pedagogics.	B Prac. Pedagogics.	A School Law and Prac. Pedagogics.
4	*Surveying.	E Algebra.	D Algebra.
5	B Geometry.	A Geometry.	Trigonometry and Surveying.
6	E Algebra.	D Algebra.	

*Work of class out of school hours.

Few words will be needed to make the scheme plain. The algebra classes are of two grades, Elementary and Higher. The former requires two terms, the first of which is marked E, and the second D ; while the latter requires three terms and are marked in their order from beginning, C, B and A. The practical pedagogics requires three terms, and the classes follow the lettering of those in the higher algebra. The geometry requires two terms, the first of which is marked B, and the second A.

Two classes in elementary algebra are formed each year, the first beginning with the Fall term and the other with the Winter term. Together these make the advanced class in algebra in the following year.

The usual recitation hour being too brief for good results in trigonometry and surveying, the Spring term class in these branches has the time of two recitations, as the schedule shows.

The Analytic Geometry and the Calculus are optional studies and are not counted a part of either the English or the Classical course.

The work in this department for the year now closing has been that indicated by the tabular statement at the beginning of this report with the following exceptions :

No class was formed in the Analytic Geometry in the Fall term, a conflict of studies preventing those desiring that branch from agreeing on an hour at which I could take the class. The failure to have the Analytic Geometry in the Fall term prevented the organization of the class in the Differential and the Integral Calculus in the following terms:

The number entering the Elementary Geometry Class in the Fall term was so large as to require a division of the class for best results. One of these divisions was made to take the place of the Analytic Geometry.

A class in Elementary Algebra was organized at the beginning of the Spring term for teachers and others not able to enter the regular classes.

All my classes, with but one exception, show a marked improvement over past years in the matter of attendance. Seven of them—three of the Fall, one of the Winter and three of the Spring term—have completed their terms without the loss of a member ; five have lost but one each ; two but two each , three but three each, and one, the irregular class in Elementary Algebra, lost six. The membership by classes has been as follows :

Fall Term.—E Algebra 31 ; C Algebra 28 ; B Geometry, Division one, 9 ; Division two, 13 ; Surveying 8 ; C Practical Pedagogics 15 ; Spelling 35.

Winter term.—E Algebra 15; D Algebra 27; B Algebra 28; A Geometry 21; B Practical Pedagogics 19; Spelling 30.

Spring Term.—E Algebra 15; D Algebra 17; A Algebra 24; Trigonometry 19; Surveying 19; A Practical Pedagogics 18; Spelling 35.

Total in classes 426.

During the first two terms of the year, I gave one hour each day to the supervision of pupils in Normal Hall.

The members of my classes have generally been quite faithful and have made good progress in their studies. The work of the year now closing has been more than usually pleasant to me, and I believe, more than usually profitable to my classes.

One thing I wish to call attention to before I close my report. The classes in Practical Pedagogics very much need a primary school in which to test methods of teaching and management, under careful supervision. Whether it is possible at this time for the Trustees to put in successful operation a school of this kind, I do not know; but of the profit of such a school, to our pupils, there can be but one opinion. I trust that some way will soon be found of giving to our professional students a good school of practice.

Respectfully submitted,

JOHN HULL.

DEPARTMENT OF PHYSICS, CHEMISTRY AND GEOLOGY.

ROBERT ALLYN, LL. D.,

Principal of Southern Illinois Normal University.

DEAR SIR:—Herewith is presented a summary of the class work done in the above department during the scholastic year of 1881—82:

FALL TERM.

Elementary Natural Philosophy	Enrolled	28,	Passed	25
Higher Natural Philosophy	"	22,	"	22
Descriptive Chemistry	"	10,	"	9
Spelling Class, B	"	28,	"	—

WINTER TERM.

Book-keeping (two hours)	Enrolled	33,	Passed	—
Elementary Natural Philosophy	"	29,	"	12
Analytical Chemistry (two hours)	"	13,	"	11
Spelling, Class B	"	48,	"	—

SPRING TERM.

Book-keeping (two hours)	Enrolled	35,	Passed	24
Higher Natural Philosophy, Sec. 1	"	19,	"	12
" " " Sec. 2	"	24,	"	18
Geology and Mineralogy	"	9,	"	9
Spelling, Class B	"	50,	"	—

The record of attendance for the school has remained in my charge; the results of which are not as satisfactory as they should be. For want of time a percentage of attendance based upon the entire number of days, has not been estimated. The reports read at the close of the several terms have a wholesome effect upon the general attendance; yet they have not always represented the facts in the case. If reports are kept they should represent actual facts. Heretofore a number of our students who were constant in their attendance have been placed on the Roll of Honor, with no indication that their attendance was less complete than those who were present from the first of the term. I recommend that hereafter only those who have been present during every roll call shall have their names placed on this special roll, and some other credit given to those who are not enrolled at the beginning, but who are regular in attendance the remainder of the term; also that the attendance record of all others shall be estimated on the entire number of days in the term.

During the first and third terms considerable attention was given to the Mineral Cabinet of the Museum. A small sum has been expended in procuring a set of typical specimens for analysis and scales of hardness, color and crystallization.

The Book-keeping has been placed in my charge; in order to have more ample facilities in this work, room No. 4 was fitted up with suitable tables and a temporary case for holding the blank books; each student having an allotted place for his outfit. In this branch it has been the purpose to give the student a good understanding of accounts, business paper and forms; it has been thought inadvisable to extend the work farther than can be accomplished in one term by devoting three hours each day. Many are unable to appropriate this amount of their time to accounts; in such cases they are allowed to continue the study the next term till it is completed. It is recommended that the walls and ceiling should be calcimined and the black boards repaired. By a few such improvements the department could be made very attractive and pleasant. With the present facilities a commendable zeal and interest have been manifested.

The instruction in Natural Philosophy has been similar to that of last year. But little additional apparatus has been purchased; it was thought more desirable to carry the larger portion of this year's allowance over, and add it to the amount for the coming year, which would enable us to purchase a few more costly pieces that could not have been purchased otherwise. A servicable plunge battery has been made in the shop of the University which adds much to the interest in the study of electricity. The Holtz Induction electrical machine has been altered to the Tœpler form. The greatest addition has been made in the Laboratory. Two new analytical tables were made and a full set of reagent bottles procured for each. There is sufficient material in the University to construct two more, but at present they are not so much needed as a suitable case for keeping the mineral specimens and products of applied chemistry which are used in class work. It is but justice to say that the care of the apparatus and the preparations necessary to use it to an advantage requires much time on the part of the instructor. During the present term, valuable service has been rendered by Charles N. Davenport in making preparations for experiments. While this has required not a little of his time, the experience has proved very profitable.

Among the articles much needed for more efficient instruction may be mentioned: A better air-pump; a set of Prof. Crook's Tubes for "Radiant Matter;" a Ruhmkorff Coil; a Distilling Apparatus; a Differential Thermometer; a Sononometer; a strong foot bellows; and a turning lathe. Again expressing my appreciation for your deep interest in the above department and valuable counsel in time of need, I subscribe myself,

Yours obediently,
D. B. PARKINSON.

DEPARTMENT OF ELOCUTION AND LITERATURE.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University.

DEAR SIR:—For the department of English Literature, Elocution and Vocal Music, the following report for the year 1881—82 is submitted:

FALL TERM.

Elocution	Enrolled	12,	Passed	8
Reading A	"	17,	"	12
" B	"	40,	"	29
Vocal Music	"	21,	"	12

WINTER TERM.

English Literature	Enrolled	22,	Passed	20
Elocution	"	13,	"	13
Reading, A	"	29,	"	20
" B	"	30,	"	23
Vocal Music	"	16,	"	10

SPRING TERM.

English Literature	Enrolled	20,	Passed	19
Elocution	"	20,	"	13
Reading, A	"	23,	"	16
" B	"	20,	"	13
Vocal Music	"	21,	"	14

In addition to the above classes, I have had charge of a division in orthography and have given my services, so far as other duties permitted, to students needing private instruction in elocution, in preparing for exhibitions and for graduation.

ENGLISH LITERATURE.

The first half of the Winter term was devoted to the literature of America; the remaining half and the ensuing term to English authors. The text book in use heretofore, Shaw's, has been continued, but the pupils have not been required to recite the entire text, and thus time has been found for the reading of copious extracts from the best authors, and for criticism upon their style. A good degree of interest in this delightful study has been attained, and it is hoped and believed that a love for good reading has been planted in the hearts of the pupils to go with and bless them through life. It is pleasant to be able to say that, with an occasional exception, the

students have studied diligently and with increasing intelligence and appreciation and deserve commendation. But it is not so pleasant to know that a majority before beginning formally the study of literature have read to little purpose and not sufficiently in a right direction. Many seem to have actually entertained the astounding belief that all good literature is dull and uninteresting. With some familiar authors they are utterly unacquainted. It is sad to know how little the English classics are read in this age of serial story papers and wish-washy novels. Our youth are being made mental starvelings by feeding their intellects upon the unutterable bosh which is scattered by the press over the land. A literary revival is needed; and a crusade ought to be preached against demoralizing literature. A poor book is dear at any price. "Reading," said the mighty Gibbon, "is the nutriment of the mind." How can the mind make a healthful growth if fed upon the unwholsome and often poisonous stuff which is offered at such seductive prices at the news-stands? The teachers can speedily bring about a reformation by directing the reading of their pupils into pure and profitable channels.

ELOCUTION AND READING.

It is a matter of regret that many teachers of otherwise intelligent views, hold elocution in light esteem, and for this elocutionists are largely responsible. "Dialect readers," profoundly ignorant of the art of correct speech, swarm over the state thick as harvesters in June. They can counterfeit the brogue of the Irishman, the broken-English of the German and pigeon-English of the slant-eyed Chinaman; can contort the face into a hundred grimaces, and assume all kinds of ridiculous attitudes. Therefore, they style themselves "Elocutionists." No wonder if some teachers, disgusted with this clownish mimicry, and thinking it to be elocution, value it lightly.

But this is not *true elocution*, which is not the art of attitudinizing, of ostentation, of showy gesticulation. It is the art of expressing thoughts, clothed in sweet words, in the most natural and effective manner. All mimicry is antagonistic to it. The simple fact is that elocution is daily and hourly taught in every school room, and good or bad habits of utterance are forming every exercise in which the voice is used is an exercise in elocution and hence *every exercise in the schools should be an elocutionary exercise.* Oral-reading is taught for a short time only each day, but elocution is taught continuously. It logically precedes reading and our first lessons were learned at our mother's knee. Surely it has a place in the common school, for all means of expression are inferior to oral discourse.

The tones, inflections and emphasis should be the same in reading as in conversation. That they are so often different, and hence, unnatural, is unfortunate. The source of the fault is generally in the method of the primary teacher. Oral reading calls into use two sets of faculties, viz: The *perceptive* and the *expressive.* Through the agency of the former, the thought of the author is apprehended,

through that of the latter it is communicated to others. The logical order is, first understand then express. Teachers fail to teach this branch successfully because they so often reverse this order, and permit their pupils to read orally before the thought is fully mastered by the pupils. The perceptive faculties must do their work before the expressive are brought into exercise. Then, when the work of communicating thought to others through the avenues of hearing and sight is begun, the whole conscious power of the mind can be given to expression. I would not be understood as asserting that one who grasps intelligently an author's meaning, *therefore* can adequately express it. The ability to clearly grasp thought and strong emotion are *two* things. But without a good conception of that which is to be conveyed, the most harmonious voice and expressive manner are vain.

A more specific account of work done may be desired. Artistic respiration has been carefully considered, and frequent exercises in breathing introduced to assist in the development of the chest, and secure the formation of a habit of full and free respiration. The attributes of voice, quality, force stress, pitch and time, have been reviewed and their use in delivery exemplified. The good qualities of the voice have been improved by exercise, and the bad suppressed.

The elements of speech have been thoroughly studied in the reading classes, and practice upon them separately and in difficult combination has been thorough, as affording the best means of improving careless and defective articulation. Syllables, words, phrases and paragraphs, accent, emphasis, inflection, slur, monotone, cadence, etc., all have been considered and reviewed. The cultivation of manner has not been neglected. Propriety of attitude and a correct manner of holding the book, have been insisted upon in the reading classes, while in the Elocution Class a good degree of attention has been given to action. The method of teaching reading in primary grades have been given thorough consideration as well as methods for variety in recitation. The progress of pupils has been fairly satisfactory.

VOCAL MUSIC.

One term is devoted to this pleasing art. The classes have been interesting and have done good work. Only State beneficiaries are required to take this branch, but as others may enroll themselves at their option, many avail themselves of the privilege, and no study is more popular. The pupils learn to sing ordinary church music with facility. This refining art is so taught, that our pupils not only know the score themselves, but are prepared to instruct others, and thus diffuse a knowledge and love of music among the people.

The calisthenic exercises, for seven years under my direction are now under the control of Miss Finley.

All of which is respectfully submitted.

JAS. H. BROWNLEE,
Teacher of Elocution and Literature.

DEPARTMENT OF PHYSIOLOGY, HISTORY AND GERMAN.

ROBERT ALLYN, LL. D.,

Principal of the Southern Illinois University.

DEAR SIR :—Twenty-three classes have been taught in this department during the year. At the beginning of the Winter term an exchange was effected between the Department of Geography and this one in the matter of two classes. A class in U. S. History was assigned to Miss Finley for a class in G eography, which latter was taught throughout the term in this department. At the beginning of the Spring term Miss Finley also consented to conduct another class in U. S. History. Neither of these classes are included in the enumeration above or in the statistics below, but will appear in Miss Finley's report.

As usual, the classes in Physiology have consisted of earnest, faithful students, and the plan of teaching has not deviated materially from that pursued in previous years. Dissections performed by the members of the class have been this year more frequent than ever before. Small animals, such as rabbits, have been unsparingly used, as well as hearts, livers, spleens, eyes, etc., from the sheep, pig and ox. At one time, during the Spring term, a whole sheep was procured, and its dissection being performed solely by the members of the class according to instructions and directions previously given, created an enthusiasm, which I am sure will not easily wear away. To make the work the more interesting, a division of labor was resorted to until twenty persons were engaged, thus: To two students was assigned the dissection of the brain; to two the dissection of the viscera, etc. As to result there was entire success. Unaided, except by previous instruction and drill, the two students to whom were assigned the dissection of the brain, removed without injury to the delicate membranes; the skull-cap showed the divisions and ventricles of the brain, even laying bare such small parts as the *pituatary body* and the *pineal gland.* The eye was dissected as follows: Being *carefully* cut from the orbit, and oval aperture through the *sclerotica* and underlying *choroid* was made a short distance from the line which marks the boundary between the *sclerotica* and the cornea. Care was especially taken not to cut or injure the *hyaloid membrane.* By letting the sunlight shine through the aperture upon the retina, the student was enabled to see that delicate membrane of the eye magnified by the *lenses,* simply by looking down through the pupil of the dissected eye, care being taken by the observer to shade his own eye from the glare of the sunlight.

In this way all the ramifications of the *apteria centralis retinæ* were seen distinctly as that artery divided up into the nervous screen of the eye, the red and scarlet color of these vessels contrasting vividly with the other retinal elements. Then by cutting and removing the cornea, the *iris crystalline lens* Zonule of Zinn, etc., could be easily shown. With equal success were the heart, liver, spleen, etc., dissected. But enough has been said to show what can be done by earnest students. enlivened and enthusiastic *to do* and thus *to learn*. This work any teacher, even in our district schools, can have done if he only will. The dry details and often distorted diagrams of a text-book must have the teacher to breathe into them the breath of life that they may become a living soul ere they can so appeal to the living pupil as to interest and instruct.

Of the seven German classes taught in this department during the year, three, one in the Fall term and two in the Winter term, were conducted by Miss Anna Wiegmann, who evinced a peculiar fitness for this work, because, in addition to the fact that she was a native born German, her earnestness, attention to duty, patience in correcting the many ludicrous mistakes which pupils will necessarily make in acquiring a foreign language gave her eminent success. In the classes under my own charge commendable progress was made by the students. During the first and second terms of the year Otto's German Conversational Grammar, from beginning to end, was fully mastered, while during the third, some fifty pages of Zimmerman's Handbook of German Literature were carefully read and translated, the use of the Grammar and conversation in German continuing during the term.

It has been my experience that in order to give the student *materials* for conversation in a foreign language, while at the same time the literature of the language is more or less studied, both "The Grammar Method" and "The Natural Method" must be used. Judging from my experience I cannot concur with those instructors, eminent though they may be, who would have the grammar entirely discarded from the class-room; nor with those indeed, who still tenaciously stick to the time honored fashion of teaching a new language solely through the medium of grammar and dictionary. During the past year I have endeavored to teach the German grammar through the medium of conversations in the German tongue, upon the noun, verb, preposition, etc., and also upon the construction of phrases and sentences.

The fact, that throughout the Southern half of Illinois there are many communities in which none but German is the medium of conversation, makes it, it seem to me, imperative that in an institution like ours, there should be afforded an opportunity to learn either the German or the English. Students whose mother-tongue is German, have come to our institution and failed of the highest success, not at all because they were naturally dull or lazy, but simply because they could not clearly comprehend the meaning of the English technical terms; and their knowledge even of English in ordinary use was so poor that no possible explanation of these terms, except in their mother-tongue, would avail anything to make

the meaning plain to them. It has been my pleasure on several occasions to assist such students in arithmetic, geography or grammar who had become puzzled over terms they could not understand, a few words in German clearing away the difficulties at once.

It may be well to say here that the teaching of German has been, for the two years during which I have taught it, a *voluntary duty*, for which I have received no compensation whatever, and yet this duty has entailed on me very much extra labor in examining and correcting written exercises and in teaching some classes out of the regular school time.

The classes in United States History have been large and interesting, but do not require special mention, as the plan of teaching has not materially differed from that pursued in the previous years. In deference to the opinion that our curriculum was too difficult for the time that pupils were required to complete it, at the beginning of this year, the Ancient and Modern History Classes were stricken out of this department, and in their place a class in General History was formed.

Besides the regular work mentioned above, I have performed the work of Librarian, my report as such being found below, and have also spent one hour per diem throughout the year in charge of the students in the Normal Assembly Room.

Appended hereto are the statistics of my department for the year:

FALL TERM.

Physiology, A	Enrolled	22,	Passed	16
General History	"	7,	"	7
History of U. S. A	"	16,	"	8
" " B	"	56,	"	28
Spelling, C	"	37,	"	32
German, A	"	8,	"	5
" B	"	13,	"	6

WINTER TERM.

German, A	Enrolled	4,	Passed	4
Method Class in U. S. History	"	13,	"	11
General History	"	2,	"	2
Geography, B	"	23,	"	16
Physiology, B	"	20,	"	20
U. S. History, C	"	29,	"	15
German, B	"	12,	"	8
" C	"	2,	"	2
Spelling, C	"	35,	"	35

SPRING TERM.

Method Class in U. S. History	Enrolled	17,	Passed	16
Physiology, A	"	17,	"	15
" B	"	14,	"	9
U. S. History, B	"	28,	"	16
German, A	"	4,	"	4
" B	"	6,	"	6
Spelling, C	"	29,	"	27

REPORT OF THE LIBRARY.

I have endeavored to perform as satisfactorily as possible, as during preceding years, the duties of Librarian. The library has been largely used this year, especially during the First and Second terms. I cannot but repeat with emphasis, what I said last year, "As the library increases the work increases," and it will soon become an important matter of consideration, whether it would not be better for the Board of Trustees to employ the services of one person who could devote his whole attention to this work, rather than in the attempt to divide one's time between the work required in the class room and that required in a large library, one or the other or both in the necessity of the case should be more or less neglected.

Very truly yours,

GRANVILLE F. FOSTER.

DEPARTMENT OF ASTRONOMY AND ARITHMETIC.

ROBERT ALLYN, LL. D.,

Principal of Southern Illinois Normal University.

DEAR SIR :—I herewith have the honor to present my annual report for the year 1881—82 :

The aggregate number of pupils that have been instructed in this department during the year has been 530. Number of classes, 23. Five of these classes were assigned to pupil teachers ; three the first term, and two the second.

About 85 per cent. of the pupils in arithmetic were successful. This is the largest average that has ever been made. The text-books were Milne's Practical and Ray's New Higher. The most of the work was in the New Higher.

What we consider a very important feature of our work this year, has been the very large amount of original work done by the classes. After the text-book examples had been thoroughly discussed, the definitions and principles well considered, the classes have then solved and explained examples of their own composing. This exercise has sometimes been varied by one pupil making an example and another pupil immediately solving and explaining it.

This kind of work has developed more thought, and led to more earnest consideration of the meaning of the definitions and to an understanding of the principles discussed, than anything we have ever before tried. It seems to us to be almost the *ne plus ultra* of success.

In all of our instruction, we have ever kept in view the fact that our pupils are to be teachers, and that the leading elements of a successful teacher are the power of original inquiry, ability to dissect the members of a great question, analyze the parts of any great truth, command the attention, and have a pleasing and ready capacity to impart to others, or lead them to investigate and find truth for themselves.

The Astronomy class this year consisted of fifteen members. All but three carried the study, and two of those were obliged to leave the University before the end of the term on account of sickness in their families.

Spelling, class A, has been under my instruction during the year. The whole number of pupils that have passed in spelling has been 68.

During the third hour of each day, throughout the year, I have had charge of the Normal Hall.

I have endeavored to do the work of the year faithfully and well, and hope it has met with your approval, and trust it will be satisfactory to the Board of Trustees.

Respectfully submitted,

A. C. HILLMAN.

DEPARTMENT OF GRAMMAR AND BOOK-KEEPING.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University.

I hereby submit to you a report of the work done during the eighth year in the Department of Grammar and Book-Keeping.

During the Fall term I had six classes as follows:

FALL TERM.

Analysis	No. of Members		15
Grammar, B	"	"	28
" C—1st Division	"	"	30
" C—2d "	"	"	25
" D—1st "	"	"	23
" D—2d "	"	"	22

During the Winter term I had five classes as follows:

WINTER TERM.

Book-keeping, A	No. of Members		13
Grammar, B	"	"	33
" C—1st Division	"	"	28
" C—2d "	"	"	39
" D—2d "	"	"	23

During the Spring term I had five classes as follows:

SPRING TERM.

Grammar, A	No. of Members		21
" B—1st Division	"	"	31
" B—2d "	"	"	24
" C	"	"	36
" D	"	"	9
Total number of pupils for the year			400

At the opening of the Winter term, Professor Parkinson relieved me of the care of the B Book-keeping Class, consisting of 23 members; and during the Spring term he has done the entire work in that science.

The labor has been much facilitated by the fitting up of a room for that especial purpose—a need that has long been felt as pressing.

As pupil teachers, Miss Wezette Atkins and Miss Maggie Bryden both did satisfactory work in the Grammar Department during the Fall term, each one having a division of the D Class.

The first two terms' work were very gratifying in their results. The pupils studied faithfully, and were regular in attendance, thus making rapid advancement. This term is somewhat disappointing, as in some classes not more than half the number remains, owing to the fact that our term does not close in time for the harvest, in which so many of our pupils must assist.

Respectfully submitted,

MARTHA BUCK.

DEPARTMENT OF NATURAL HISTORY.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University.

DEAR SIR.—I have the honor of presenting the following as my report upon work done in this department during the year 1881–82:

As during former years, the teaching work has been done during the Institute or Summer session; the Fall, Winter and Spring terms, the same number of classes in each as last year. As heretofore no record of class work was kept in the Botany and Zoology Classes during the Summer session, nor were any particular text-books required, though the topics of daily work were arranged with reference to the text-books usually used here rather than others. In Botany, besides the class room drill and analysis, considerable field work was done. The same plan was pursued in Zoology, though I think more field work was done in this branch than in Botany. As an aid in this study, we found the tables published in the Principal's Report last year very beneficial in identifying such specimens of that interesting genus *Catocala* as were obtained in the afternoon excursions. Another year's use of those tables of insects, together with the calls for them from other places convinces me of the wisdom of their preparation and publication, though I am fully aware that they contain imperfections. The number of students engaging in the practical field work, was, I judge, equal to that of last year. Though no class record was kept of either study, several took examinations in the studies at the close of the session for record on our book.

During the Fall term I had the regular class in Elementary Zoology assigned me on the programme, and besides a called class in Advanced Botany, of such as for various reasons could not well take the study in the spring.

The record shows the following condition of the two classes:

Elementary Zoology...	Number, 15	Left Class, 1	Passed, 14
Advanced Botany....	" 7	" 0	" 6

Besides this, I had charge of a spelling class during this term, in which thirty different ones were enrolled. No changes have been made in text-books during the year in this department.

In the Winter term only one class, aside from spelling, was conducted in this department with results as follows:

Advanced Zoology....	Number, 20	Left Class, 4	Passed, 16

At the opening of the term quite a number of those not familiar with our diacritical marks, were assigned to me for such instruction, after which thirteen remained in my room for spelling, continuing with me the most of the term. I may say that unfortunately sickness prevented my hearing my class for three weeks of this term, but during that time the recitations were conducted by one of the senior's, who was at the same time a member of the class.

During the Spring term I have had four classes, those regular in course, Elementary and Advanced Botany, and the two grades of Zoology, as called classes, with results as follows:

Advanced Botany.....	Number, 30	Left Class, 4	Passed, 26
Elementary "	" 19	" 4	" 15
" Zoology...	" 13	" 2	" 11
Advanced " ...	" 14	" 5	" 9

The work in Botany this term has been more than usually interesting, and I trust profitable to the classes. Early in the term a quantity of boxes were obtained, made similar to those in use in our herbarium, each capable of holding about 100 sheets of plants. With these as an incentive, twenty-five of the students filled more or less completely, from one to several of the boxes, part of the plants being their own collecting and pressing, and a portion such as I could furnish from some of my old duplicates. Besides the extra knowledge acquired by this practical work, they will have collections, that judiciously used, may furnish profitable topics for many an object lesson in the schools over which these students may be called to preside. Some practical work has been done in Zoology, both in insect work and taxidermy, but the work that claimed most attention was botanical. It is, perhaps, unnecessary to state that the microscope, herbarium and cabinets have been freely used as aids in this department.

Respectfully submitted,

G. H. French.

DEPARTMENT OF PHYSICAL GEOGRAPHY.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University.

DEAR SIR :—I herewith submit a report of the work done in my department during the school year just closing :

In the different classes in Geography, during the Fall term, 102 pupils ; Winter term, 80 ; Spring term, 61. The class in Physical Geography, Spring term, 16. I also taught a class in United States History numbering 12. During the Spring term, and in the same branch, Winter term, a class of 42. The pupils here in most cases have been diligent in their application, and their progress has been gratifying.

In addition to the study of the text all of the Geography classes have done work in map drawing, which they have found to add definiteness to their geographical knowledge.

My class in spelling, a division of the C work, numbered 22 during the Fall, 15 during the Winter term.

During a greater part of the Spring term Mr. J. O. Duncan taught, under my supervision, one of the C classes in Geography, and the interest and progress of the pupils under his care show he that did very faithful work as a pupil teacher.

It will be noticed that the number studying geography has not been as large as in some previous years. The reason of this difference I believe to be found in the fact of the more advanced grade of our pupils. A larger number than usual having taken this work by examination.

In the fall the Calisthènic Drill was transferred to my department and has since been under my charge. We find that those young ladies who have had for some time the benefit of the calisthenic practice show an improvement in bearing and in the freedom and ease of their movements which give them an added grace, conducive to more perfect health, and prepares those who desire to teach to conduct such exercises in their schools.

Respectfully submitted,

ESSIE C. FINLEY.

DEPARTMENT OF DRAWING AND PENMANSHIP.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University.

DEAR SIR :—The following report of work done in my department for the year 1881—82 I submit for your consideration.

The number in classes this year has been as follows :

	DRAWING.	PENMANSHIP.
Fall Term.....	68	108
Winter Term.....	59	78
Spring Term.....	55	48

Students in drawing have manifested more than ordinary interest in work this year, owing partly, no doubt, to the favorable condition of the weather, which has not been warm and enervating as usual. Twenty-two have finished the course, making the Diploma Drawings required to indicate the work accomplished. Classes have been fuller than ever before and pupils have labored zealously throughout the entire year.

Object drawing, so important to the prospective teacher, has been practiced with much success, and with a view to rendering it highly practical.

The classes in penmanship, always large, could not be accommodated the Fall term, owing to lack of seating capacity. Provision should be made in future against this want, and also for more blackboard room. Pupils need blackboard drill in penmanship as well as in drawing, but with our very limited space, this is impossible.

A class in spelling was assigned me at the beginning of the Winter term, which continued through the year, and I have presided at the piano for devotional exercises and for calisthenic drill.

Very respectfully,

JENNIE CANDEE.

DEPARTMENT OF MILITARY.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University.

DEAR SIR:—I have the honor to submit, this, my second annual report, for the collegiate year ending June 15, 1882:

The new rule of the faculty requiring all male students, except such as may be excused for special reasons, to attend military drill, etc., has been productive of good, which was especially the case in the Fall term, as the young men enrolled their names in the Military Department as a matter of course. There have been 187 cadets enrolled this year against 165 last, and 48 in attendance for at least a part of all three terms against 40 last year. There were 120 in the Fall, 124 in the Winter and 104 in the Spring terms respectively.

About 60 cadets got the prescribed uniform this year. I recommend that all be required to get them who come to remain for more than one term at a time, as a uniform is the cheapest clothing a cadet can wear, and the proper thing for military purposes.

The Military Department was more of a success during the Fall term than it has been at any other period of my two years duty here; which may be accounted for by the addition, during that term, of numerous military pictures, the adoption and enforcement of a set of cadet regulations, the organization of a brass band, the grass on the drill ground being cut short, the rifles being cleaned, etc. I must say that at best the accommodations for an efficient military department are not as good as they should be; the hall used as an armory is a very fine one, but there are too many steps, 100, to climb to reach it, besides, as the building was not constructed to accommodate a Military Department, the marching of troops in the cadenced step in the large hall is likely to shake and injure the building. None of the places free from trees now, used to drill on, are large enough, nor is the ground even enough, and the grass is not cut as often as it should be. To obviate the necessity of climbing up stairs to the armory in pleasant weather, gun racks were put up in the basement hall, which not being well lighted, the cadets cannot readily find their proper rifles. These facts, taken as a whole, prevent the obtaining of anything like good military discipline, and as the large majority of the young men who have been in this department for the past two years, want to learn correct views of military duties, and as the State of Illinois has done so much for the Military Department at Champaign, and

as it takes rank among the first in military education, it would, undoubtedly, if the matter was properly presented, be glad to make this department a model for the militia of this part of the State to pattern after, therefore, I now earnestly recommend what I suggested in my annual report of last year, *i. e.*, to ask the Legislature at its next session to make an appropriation for an armory and improvement of a portion of the campus for a drill ground and for other purposes.

I have carefully examined the grounds and would suggest that a building to cost about $75,000 be put up on the west side of the Normal building, and $10,000 be asked for to make a suitable parade or drill ground, an even, grassy plat, 40x80 yards, free from trees or other obstruction, on the west side of the proposed armory building, which, besides its use for military purposes, could be made to contain rooms for a library, museum, the two literary societies, etc., on the same level with Normal Hall, and connected with it by an iron passage way, with the water closets, storerooms for coal and the artillery carriages, etc., in the basement on a level with the basement of the Normal building, having the armory proper, with galleries around it for visitors, on the first floor, when viewed from its front on the west side. At my request, Mr. C. E. Brush, an experienced architect of this city, has examined the site and made a plan and elevation of a building that meets my approbation, and to these drawings I respectfully ask the attention of the Trustees and of yourself.

The Rev. J. J. W. Place having moved from the city, Dr. J. Y. Aitchison, also of the Baptist Church, has been tendered and accepted the position of Chaplain, and he has delivered one very appropriate sermon to the corps.

I respectfully renew my application to the Trustees, made through you for a sum of money, say $25 per quarter be set aside to be expended by me for the benefit of this department. I trust that shelter will soon be provided for the artillery carriages, and I insist that the grass on that portion of the campus to be used for drills, etc., be kept cut short all the year around, at least during the collegiate year, and that a man be employed as often as once a term to clean the rifles, cannon, etc. The rifles have recently been put in fair condition, a fact I am pleased to note, thanks to you.

I regret that the Governor has recently decided by letter to me, from his Adjutant General, that he would make no more honorary appointments of our graduates as Captains on his staff.

I take pleasure in commending Cadet Henry A. Stewart, First Lieut. and Quartermaster D. C. C., as worthy of a cadetship at West Point. Cadet Stewart has been in the Military Department continuously since its establishment, and has done his duty faithfully in every grade of rank in the corps.

The military instruction has been about the same this year as last, and I am pleased to observe that offices in the corps are looked upon with more favor.

The cadet band since its organization in December last, has furnished music for all competitive drills between the cadet com-

panies and for all public entertainments given by the two literary societies, thereby redounding to the credit of the whole institution as well as adding greatly to the interest of this department.

Very respectfully, Your Obedient Servant,

H. T. Reed,

Lieut. U. S. A., Prof. Military Science and Tactics.

REPORT OF THE CURATOR OF THE MUSEUM.

ROBERT ALLYN, LL., D.,

Principal Southern Illinois Normal University,

DEAR SIR :—I would respectfully submit the following as my report upon the work done in this department during the year 1881—82: The general plan of the work has been much as it was last year, viz: keeping up work in the general collection by classifying and placing in the museum such miscellaneous material as is constantly coming to us from our friends, while at the same time pushing work more actively in about two directions. Last year these two directions were in the line of insects and shells, using the large collection of the first made during the summer to obtain by exchange material in the last, of which we stood in need. This year a large collection of insects was made during the summer and some exchanges were made as the detailed statements following will show, but the greater share of my time has been devoted to work on the herbarium. Valuable assistance has been rendered in this work by the following students, Fall term, Mary D. Pope, Mary A. Brown, Fannie Aikman and W. J. Eddy. Winter term, Alicia E. Beesley. Spring term, Mary Buchanan, Clara Buchanan, Lizzie Unruh, Bettie C. Anderson, Anna R. Shinn, E. S. Houts, Denard Williams, Jacob Gruenig and O. N. Gibson. This assistance consisted in fastening the plants and their labels on the paper, after I had written the labels and recorded them in our catalogue. This enabled me to do much more than could have been done had I been compelled to do the pasting as well as the label writing.

ARCHEOLOGY.

Considerable has been added during the year to our collection of relics of the early inhabitants of this locality. Three trips have been made with Dr. Cyrus Thomas, Archeologist of the Smithsonian Institution for the purpose of obtaining specimens and information. Prof. J. Hull, one trip to some part of Union County, from which was obtained a very fine urn, perfect in every respect, except a slight scratch in one place from the spade. Dr. Allyn, one trip to Missouri, from which a similar urn was obtained, but in a broken condition; and one trip by myself to a place not far from town. Aside from some bones, broken pottery and flint implements, the only things of value I obtained were two bone stillettoes that must have been used in making holes through skins for the purpose of fastening them together with thongs. They

looked as though they might be made from the shaft of such bone as the tibia of a deer, and one of them was very smooth as though it had been used considerable. Besides these, quite a number of arrow heads, axes, flesh scrapers and other implements have been obtained from Mr. Geo. H. Center, at the time living at Carterville, among which is also a set of stones used for grinding grain. A number of specimens have been contributed by students and friends of the school.

Before closing this topic I would recommend that more case-room be supplied to the museum the coming year, partly with a view of providing suitable place for the specimens of this department.

MINERALS AND FOSSILS.

Aside from three collections of minerals obtained from A. E. Foote, M. D., of Philadelphia, but little has been added to our stock. Prof. Parkinson and his geology class have rearranged and classified much of that we had last year, together with the new minerals obtained. But little has been done in fossils. Some plaster casts of rare fossils were obtained in part exchange for some obsidian Indian disks and a few fossils have been donated. It is my intention to devote extra time to this group next year to place it on a par with the other departments.

BIRDS, ETC.

Early in the year 56 specimens of bird skins were received from Professor S. A. Forbes, of the State Laboratory of Natural History, the work being done by Mr. C. W. Butler, of Anna. Later 16 mounted birds were purchased from Geo. H. Center, of Carterville, and a number of Colorado bird's skins were contributed by Mr. J. G. Allyn. Besides these a number of specimens have been mounted by myself some fresh and some of the dry skins of rare birds, foreign to our locality, relaxed and mounted.

BOTANY.

As intimated in another place, the most of the work done this year has been done upon the herbarium. At the beginning of the year there were 1,374 specimens or sheets of specimens. During the Fall term 626 were mounted and placed in the boxes, and during the Winter and Spring terms 1,140 more were added, making now 3,140 in the herbarium. These represented about 3,000 different species and well marked varieties. These plants were, aside from quite a quantity collected by yourself in the White Mountains and some collected here during the summer, those that had been obtained by exchanges, remained unmounted and what we lacked from my old duplicates. There are a few still to be worked up, all of our algæ, a few lichens and mosses, and a small package collected by Miss Sara Saul in Colorado, that I have not yet had time to identify.

SEEDS AND FRUITS, ETC.

Some addition has been made to this part of the museum, very little to the fruits, but more to the seeds, so that there are now 480 different kinds of seeds in labeled show bottles, besides several kinds now on hand that have not been put in the bottles.

In addition to these Mr. E. Kirkpatrick, of Anna, has kindly furnished for the museum a nice collection of the woods of Union County, which was first exhibited at the State fair and then sent here.

CONCHOLOGY.

A few shells have been donated and one exchange has been made of plants for shells with Jos. F. James of Cincinnati, by means of which 24 species of unionidæ were obtained, 22 of which were new to our collection. All but a few unclassified donated shells have been labeled and placed in the cabinet. I am satisfied that by use of material easily attainable here we can increase this department from year to year so that it will not be long before we shall have a cabinet that will compare favorably with that of any other institution. The principal thing needed now is more books for the determination of species where shells come to us unclassified.

ALCOHOL SPECIMENS.

But little change has been made in this department since reporting last year. As heretofore some things have been added from time to time, and these have mostly been labeled and placed in the museum. Our shelving, as now arranged, is not sufficient to properly display this class of specimens, even what we now have on hand. There is one division of this group—spiders—in which work needs to be done soon in classifying what little material we have, and adding to it what can be found in our locality, at least. I have already named a few species but those named are far too few to represent the group as it should be to place it on par with with other parts of the museum.

NEW LONDON COLLECTION.

Reference should be made to the valuable collection from New London, Conn., obtained by Dr. Allyn, while on his visit to that place last summer, and contributed by J. J. Copp, Esq., Hon. J. Allyn, Chas. Allyn, Esq., T. M. Allyn, Esq., Mr. John Crandall, Capt. J. O. Spicer, Frank Washburn, Esq., Chas. M. Douglas, and many others, all residents of that place. Without enumerating all of the specimens in the collection we may mention the lower jaw bones of the right whale, a vertebra of the sperm whale, two horns of the sea unicorn, several swords of the sword fish, and snouts of the saw fish, walrus heads and tusks, fan, pen, brain and other kinds of coral, a model of a kyack, or the Esquimax boat, and the duck traps he uses in catching ducks, many valuable minerals and rare woods from various parts of the world. There is no collection

in the museum that attracts more attention than this, which has been placed in the southwest corner of the room.

CONTRIBUTIONS.

It is with pleasure that I append here the following list of those who have helped to add to our collection during the year, together with the objects contributed. It is possible that some names may be omitted, especially if the objects were handed to some other member of the faculty, and found their way into the museum without my knowledge of donor or object donated. If any names are omitted I wish to assure our friends it is not intentionally done. The following is a list of all of which I have at time of writing any record:

George Brush, *Papilio Asterias*, *Gortyna Nebris*, two Indian arrow heads.

Tyler McWhorter, Aledo, 13 species of Coal Measure fossils.

Isaac Farner, Rattle Snake.

C. W. Butler, Anna, Cotton Mouth Snake.

Belle Rice, Cobden, *Tolype Villeda* larva.

S. E. Harwood, Coffee Tree pods and shells.

Benj. Eckles, Wheel Bug.

Miss Freddie, Payne, Palestine, Water Scorpion.

Miss Lizzri Unruh, Spiders.

Mrs. Beard, Water Scorpion.

Prof. J. T. Moulton, Jr., Knob Lick, Mo., quartz gueode, Canoe or Paper Birch bark.

Huldah Dollins, Mantis.

George Bachtel, Cold Springs, Shelby County, Indian drill.

Ira Clarke, Summit Station, N. Y., four packages of seeds.

E. H. French, Lawrenceville, nine packages of seeds.

Robert Allyn, New England *Algæ* or Sea Mosses, several packages of mosses, ferns, linchens and other plants from the White Mountains; minerals and other things in the New London collection.

Prof. A. C. Hillman, Trap Door Spider from Arkansas.

Lieut. H. T. Reed, Water Beetle; fiber from roots of Palm tree, long moss and shells from the South, cedar twig from President Garfield's grave.

Edward C. Hughes, Corn Snake, Spreading Adder.

Kate Thomas, Water Scorpion.

Kate Ingersol, *Sphinx* larvæ, Cabbage *Pleusia*, *Plusia Biloba*.

Izzri Loomis, Water Beetle.

G. C. Roberson, Villa Ridge, Indian spade.

Hon. W. H. Lemma, petrified cedar from Arizona.

Sara Saul, Boulder Colorado, Salamander.

Hettie Stokes, *Cermatia Forcipes*, *Plusia Biloba*.

R. G. Sylvester, *Rhyssa*.

May Duff, a snail.

Della Nave fossils from Union County.

Lucien W. Gordon, Equality. *Eperia Stellata*.

Eddie Foster, a Spirifer fossil.
C. R. Miller, a Mud Fish.
Geo. Ennison, Bee Moth *pupæ* and *larvæ, Sphinx pupa.*
T. E. Williamson, Belknap, Johnson County, some Pentrimite and other fossils.
Rev. E. H. Parkinson, Garrison, Kansas, Coffee Beans and some curious seed pods.
C. E. Kirkpatrick, Anna, 150 specimens of wood from Union County.
Edward M. Hanson, Indian relic.
Mrs. Mary McBride, Grand Ledge, Michigan, *Corydalis Cornuti* and two fossils.
O. S. Marshall, Salem, False Scorpion.
William Underwood, Campbell Hill, a fine Ammonite from Cook County, Texas.
J. W. Wood, Shiloh Hill, Buffalo Horn and Indian arrow heads.
T. S. Marshall, Salem, *Cermatia Forcipes.*
John Borger, 3 kinds of seeds.
Susie Storm, Rhinoceras beetle.
Mr. Simons, *Sphinx Pupa.*
Wm. Williams, *Cecropia* Cocoon, Pentrimite stem, Japan Quince, fire brick from blast furnace at Carondelet, Missouri.
May Elliott, Sparrow Hawk.
Charles Marten, specimen of sole leather.
J. B. Harnsberger, Water Scorpion.
Mary Brown, pods of Enslenia.
E. Hindman, 2 kinds of seeds.
Maud Thomas, Salt crystals from St. Johns.
Arista Burton pebbles from the bed of the River Rhine.
Joseph G. Allyn, six birds from Colorado, viz.: a Blue Crow, a Clark's Crow, a Water Ouzel and three Mountain Blue Jays.
John Marten, Pagonia Pendula plants.
Wezette Atkens, Coffee Tree pods.
Wilson Cook, Saline County, a Stalagmite.
Capt. Spencer, *Vinaigaroo* from Fort Stockton, Texas.
W. W. Colvin, Lamellate sand stone.
E. J. Ingersol, Confederate $20 bill.
Frank Woolsey, Water Beetle.
G. M. O'Hara, Horned Owl.
Jacob Gruenig, vegetable ivory, a cross made from the same, and spun glass.
Mrs. J. Hull, 12 species of plants.
David Rigdon, Galena, Kansas, Galena ore.
Mary D. Pope, Teasel Cucumber.
E. S. Houts, several species California plants.

INSECTS.

During the summer quite a number of insects were collected, a few of which were new to the cabinet, and have been set aside to

be placed in the classified collection. Of the rest, those in good, fresh condition have been reserved for exchange for other insects, a part of them having been already so used; those of the Lepidoptera not quite perfect, have been used as material for analyzing in the Zoology classes. The whole number pinned during the season was 1,635, including all the orders.

Insects have been sent to the following persons in exchange as follows: To Joseph F. James, Cincinnati, in exchange for fresh water shells; to Eugene M. Aaron, Philadelphia, in exchange for *Diptera*; to A. Conradi, Bethlehem, Pennsylvania, in exchange for European insects; to C. E. Worthington, Chicago, in exchange for other insects; to Jennie E. Clay, Cobden, the same.

I may say that the exchange for the Diptera was conducted by Mr. John Marten, and was a very valuable one for us. The flies were not named, but we have gone over a part of them, and find several species new to science, the names and descriptions of which Mr. Marten will soon publish. The principal thing now needed in working up our Diptera is more books. A few works devoted specially to that subject were purchased during the year, but a few more of the German and English works in which many species are described are greatly needed.

A portion of my out of school time has been devoted to rearing and noting the life history of some of our insects, making these notes the basis of articles for publication in scientific periodicals. So little of this has been done that comparatively little is known of the early stages of the most of our common insects. I have concluded to do more of this the coming year, as it not only adds to the stock of knowledge of these animals, but enables me to secure much finer specimens for the cabinet and for exchange than could be had by chance captures.

But little has been done in arranging insects in the cabinet, they being left arranged very much as they were last year. Those received new to the cabinet have been placed in empty drawers, to be put in their proper places when the number is sufficiently large that rearrangement seems necessary.

I present with this an addition to the tables for analyzing insects for use in Zoology classes. I have received so many encouragements from the success of their use in my own classes, and from those using them in other places, that I feel justified in doing this. The tables prepared this time are upon the *Noctuidæ*, one genus of which formed the subject for last year's work, and I have not reproduced the work here that was done last year, but when that genus is reached the student is referred to the synopsis of last year for the species. My synoposis of the *Noctuidæ* of Illinois lacks descriptions of several species, because I failed to get insects from which to make descriptions, but I hope to remedy that before I revise.

SYNOPSIS OF THE NOCTUIDÆ OF ILLINOIS.

By G. H. FRENCH.

At the beginning I would say that I do not claim the following to be a synopsis of all the species of *Noctuidæ* that have been found in Illinois. I have, in fact, 74 species on my list that are not found in this synopsis for the reason that my descriptions have been made, with very few exceptions, from the insects instead of from what had been written before, and I could not get specimens of these species in time to use them. In the arrangement and names I have followed the new check list recently published by Mr. A. R. Grote, of New York, as that will be the basis of the arrangement of our cabinet, and will probably be taken as authority by the majority of those working in this family. In seeking for characters by which to distinguish the genera and species, I have endeavored to take such as would be the most easily recognized by our students. Some characteristics commonly used, and, perhaps among the best, require higher magnifying power than we can place in the hands of the students, and they have been rejected. This has served to render the tables somewhat artificial, but it has seemed that the end would justify the means. When color is referred to without location being given, it is intended to apply to the fore wings, as they are more often characteristic in color than the hind wings. As in former tables, the specimens are supposed to be spread as prepared for the cabinet. That the student may more readily understand some of the terms used in the descriptions, the following brief definitions are offered:

Anal angle—The inner posterior angle of the hind wings.

Antennæ—Two organs projecting from near the top of the head.

Apex—In general the anterior outer angle of the wings.

Anteapical—Near the apex towards the body.

Basal line or basal half line—A line on the fore wings near the body from the costa to the median vein.

Costa—Front edge of wings.

Dash—A long mark of some other than the ground color, basal dash from the middle of the base of the fore wings outward; posterior dash near the posterior angle, subapical dash below the apex near the outer margin.

Hind margin, that opposite the costa on the fore wings.

Inner margin, edge of hind wings next to the body.

Dentate—Toothed.

Subdentate—Only slightly toothed.

Discal cell—A space between the subcostal and median veins.

Orbicular—A round spot near the middle of the fore wings.

Palpi—Two organs projecting from beneath the head between which the tongue is coiled when not in use.

Porrect—Straight out.

Posterior angle—Juncture of the outer and hind margins of the fore wings.

Posterior margin—The hind margin.

Reniform—A kidney shaped spot near the end of the discal cell.

Subreniform in Catocala—An inflexion of the t. p. line below the reniform, sometimes closed and nearly or quite separate from the rest of the line.

Stigma or Stigmata—Used for the orbicular and reniform.

T. A. line or transverse anterior—A transverse line on the fore wings about a third of the distance from the base of the fore wings.

T. P. line or transverse posterior—A line about two-thirds of the distance from the base of the fore wings.

Truncate—Cut square.

TABLE OF THE FAMILIES OF LEPIDOPTERA.

A. Antennae filiform, terminating in knob or club.

a. Having six feet adapted for walking.

b. Body rather slender, width of thorax from one-eighth to one-sixth the length of the hind margins of fore wings.

c. Colors black, white or yellow, size generally from medium to large - - *Papilionidæ*, (*Book 1, Page 31*).

cc. Colors blue, coppery or blackish, size generally small. *Lycaenidae*, (*Book 1, Page 32*).

bb. Body robust, width of thorax from one-fourth to one-half the length of hind margin. - - - *Hesperidae*, (*Book 1, Page 32*).

aa. Having four feet adapted for walking - - *Nymphalidae*, (*Book 1, Page 31*).

AA. Antennæ not knobbed, variable.

1. Body stout, spindle shaped; head free, not sunken into thorax; palpi very stout and hairy; compressed, close together so as to appear as one; third joint concealed; wings narrow; hind wings much shorter than fore wings. *Sphingidæ*, (*Book 2, Page 27*).

2. Body moderately slender; head free; palpi slender; approximate, the third joint free; wings narrow, mostly hyaline; the hind wings nearly as long as the fore wings; small moths. *Ægeridæ*.

3. Body moderately robust; head free; antennæ simple or pectinate; palpi slender; third joint not concealed; wings of medium width or narrow, outer margin oblique; thorax without tufts. *Zygaenidæ*, (*Book 2, Page 27*).

4. Body moderately robust or robust; head generally small and apparently sunken into the thorax; palpi very short or obsolete;

third joint when present mostly concealed; antennæ simple, serrate or pectinate; wings ample; narrow in only a few species.
Bombycidæ, (*Book 2, Page 27*).

5. Body stout, thorax and abdomen often tufted; antennæ simple, serrate or slightly pectinate; palpi well developed, the tips at least of the third joint not concealed; wings of moderate size or ample; fore wings oblong or triangular. *Noctuidæ.*

6. Body slender; head free; antennæ simple or pectinate; palpi rather small, slender; scales fine; wings broad, thin. *Geometridæ.*

7. Body moderately slender; head free; antennæ simple, moniliform or ciliated; palpi mostly long, compressed; fore wings triangular or oblong. *Pyralidæ.*

8. Body slender; size small; head free; palpi very short, beak like; fore wings oblong, crossed by bands that are often metalic. *Tortricidæ.*

9. Body slender; size small, many minute; head free; antennæ long, filiform; wings pointed, heavily fringed on hind margins. *Tineidæ.*

10. Body slender; head free; fore wings trifid or bifid to or near the base; hind wings trifid. *Pterophoridae.*

NOTE.—Only one family of the above is represented here. The families of butterflies being introduced for a more convenient reference of cabinet or spread specimens to their appropriate families, and the others the better to distinguish the Noctuidae by comparison. In all cases I have given the expanse of the insects from tip to tip of the fore wings, but this must not be taken with too rigid an application, as the insects in a species are apt to vary in size on account of sex, climate or abundance of food. The figures can, however, be taken approximately. I would acknowledge the assistance I have received from the writings of Mr. A. R. Grote and others who have made this difficult family a special study, especially the new check list prepared by Mr. Grote. While some of the names, on account of changes, are unfamiliar, I am not prepared to say that they ought not to be, as they are for the discussion of nomenclature is entirely beyond the province of this paper.

TABLE OF GENERA.

* Eyes naked.

A. Thorax and abdomen tufted.

a. Tufts of thorax two posterior crests.

b. Posterior angle of fore wings projecting back by at least the fringe; palpi surpassing the front by the length of the head.

c. Apex of fore wings produced; palpi ascending - - *Pseudothyatira, 1.*

cc. Apex of fore wings not produced; palpi porrect - - *Habrosyne, 2.*

bb. Posterior angle rounded; palpi surpassing the front by the length of the head, erect.

c. The whole terminal space of both wings pale yellowish, rest dark - - - - *Zale, 90.*

cc. Only a part, if any of the terminal space lighter than the rest.

d. Abdominal tufts not white.

e. One small abdominal tuft on the third joint - - *Pheocyma, 91.*

ee. Several small abdominal tufts - *Homoptera, 92.*

dd. Abdominal tufts white or tipped with white - - *Ypsia, 93.*

aa. Tufts of thorax one posterior crest, posterior angle projecting backward, outer margin entire - - - - - *Plusia, 58.*

aaa. Thorax with one posterior tuft, posterior angle round.

b. Outer margin of fore wings dentate or subdentate.

c. Apex of fore wings not produced.

d. Abdomen longer than the hind wings.

e. Hind wings dark, palpi ascending, markings of fore wings,

f. Light spots on the outer half - - *Bryophila, 8.*

ff. A light space in the center - - - *Chytonix, 9.*

fff. A dark dash below the stigmata - - *Hyppa, 18.*

4f. A dash at the base - - - - - - *Actinotia. 19.*

ee. Hind wings white with very little dark, or outer border; palpi porrect - - - - - *Prodenia,21.*

dd. Abdomen equaling the hind wings in length - - *Perigea, 16.*

cc. Apex of fore wings produced so that the outer margin is oblique.

d. Abdomen longer than hind wings, fore wings narrow, hind wings nearly the same color as fore wings - - - - - - - - - - - *Anytus, 11.*

dd. Abdomen equal or scarcely longer than hind wings ; fore wings broad.

e. Under side not banded with black and some other color - - - - - - - - - *Euclidia, 76.*

ee. Under side, at least, with bands, black with white, red or yellow - - - - *Catocala. 78.*

bb. Outer margin of fore wings entire, palpi ascending.

c. Apex of fore wings not produced.

d. Abdomen longer than the hind wings.

e. Ground color of fore wings brown or brownish gray - - - - - - *Laphygma, 20.*

ee. Ground color of fore wings sordid white with dark basal and terminal markings - - *Chamyris, 67.*

dd. Abdomen equal the hind wings, or scarcely longer.

e. Terminal space of fore wings pale reddish or whitish - - - - - *Eustrotia, 68.*

ee. Terminal space of fore wings brown - - - - - *Lithacodia, 66.*

cc. Apex of fore wings produced, color wood brown - - *Sphida, 30.*

4a. Thorax with two posterior tufts, or the tufts double; palpi short; ascending.

b. Outer margin of fore wings dentate.

c. Abdomen equal hind wings, posterior angle projecting backward, apex not produced - - -
Euherrichia, 69.

cc. Abdomen longer than the hind wings, posterior angle not projecting backward, apex produced - -
Brotolomia, 24.

bb. Outer margin of fore wings entire, abdomen longer than the hind wings, apex not produced - - - -
Euplexia, 23.

5a. Thorax with one anterior tuft, but no posterior.
b. Outer margin of fore wings dentate, palpi porrect, apex of fore wings not produced - - *Luceria, 13.*
bb. Outer margin entire, apex produced.
c. Palpi porrect, not projecting beyond the head - -
Calocampa, 46.
cc. Palpi ascending, projecting beyond the head one-fourth its length - - - - - *Telesilla, 56.*

6a. Thorax with two anterior and one posterior tufts, outer margin of fore wings entire, abdomen longer than the hind wings - - - - - - - - -
Dipterygia, 17.

7a. Thorax with one anterior and two posterior tufts; outer margin of fore wings dentate or subdentate.
b. Apex of fore wings not produced.
c. Reniform if white not narrow, nor oblong and oblique from above outward - - - - - - - *Hadena. 14.*
cc. Reniform white, narrow, oblong, oblique, running below median vein - - - - - - - *Helotropha, 26.*
bb. Apex of fore wings produced.
c. Color yellowish brown, stigmata not white or yellow -
Apamea, 27.
cc. Color wood brown; stigmata concolorous or white or yellow - - - - - - - - - - *Gortyna, 28.*

8a. Thorax with one anterior and one postertor tuft, outer margin of fore wings entire, apex not produced
Achatodes, 29.

AA. Thorax tufted.
a. Thorax with one anterior tuft - - - - - *Gortyna, 28.*
aa. Thorax with one posterior tuft.
b. Outer margin of fore wings dentate or subdentate.
c. Abdomen longer than hind wings, apex of fore wings more or less produced.
d. Palpi ascending.
e. Wings not banded with black - - - - - - - -
Trigonophora, 22.
ee. Wings banded with black, at least on the under side
Catocala, 78.
dd. Palpi porrect, surpassing the head by one-half its length - - - - - - - *Lithomia, 45.*

cc. Abdomen shorter than the hind wings, the latter with numerous bands of black and yellow - - - *Parthenos, 80.*

bb. Outer margin of fore wings entire.
c. Abdomen longer than the hind wings.
d. Base of fore wing not colored differently from the rest of the wing - - - - - - - *Ingura, 52.*
dd. Base of fore wing carneous - - - *Abrostola, 57.*
cc. Abdomen equal or scarcely exceeding the hind wings.
d. Hind wings white or smoky - - - - *Oligia, 15.*
dd. Hind wings yellow with a black border - - *Allotria, 79.*

AAA. Abdomen with small dorsal tufts, palpi porrect, wings narrow - - - - - - - *Hypena, 102.*

4A. No dorsal tufts on thorax or abdomen.
a. Outer margin of fore wings entire.
b. Abdomen longer than hind wings.
c. Covering of thorax scales, apex obtuse.
d. Palpi porrect, end of fore wings round, not oblique *Diphthera, 3.*
dd. Palpi ascending.
e. Palpi surpassing the front by half the length of the head, end of fore wings not oblique *Microcoelia, 7.*
ee. Palpi surpassing the front by the length of the head, end of fore wings a little oblique *Marasmalus, 51.*
cc. Covering of thorax hairs and scales.
d. Palpi porrect and
e. Surpassing the front by half the length of the head or less.
f. End of fore wing rounded, a little or not at all oblique.
g. Apex acute, color gray or blackish gray *Apatela, 4.*
gg. Apex obtuse.
h. Abdomen more or less hairy - *Agrotis, 10*
hh. Abdomen not hairy.
i. Center of fore wings not pale *Caradrina, 33.*
ii. Center of fore wings pale, base of hind wing black - - *Lygranthœcia. 62.*
iii. Center of fore wings pale, base of hind wings yellow - - *Anthœcia, 63.*
4i. Color olivaceous, fore wings with whitish transverse lines - - *Schinia, 59.*
ff. End of fore wings quite oblique, nearly straight, apex acute, costa falcate - *Cucullia. 47.*
ee. Surpassing the front by the length of the head, end of fore wings round, not oblique; apex obtuse *Scolocampa, 31.*

eee. Surpassing the front by twice the length of the head, apex acute.
f. End of fore wings round - *Hypsoropha, 55.*
ff. End of fore wings angled - - *Calpe, 53.*
ddd. Palpi ascending, surpassing the front by the length of head.
e. Posterior angle projecting backward - - *Plusiodonta, 54.*
ee. Posterior angle not projecting back - - *Parallelia, 84.*
ddd. Palpi erect, surpassing the front by twice the length of head, end of fore wings rounded, apex obtuse *Philometra, 99.*
ccc. Covering of thorax hairs, fore wings oblong, apex obtuse *Arsilonche, 5.*
bb. Abdomen equal the hind wings.
c. Covering of thorax scales, palpi ascending, wings white with black markings - - *Polygrammate, 6.*
cc. Covering of thorax scales, palpi porrect.
d. Palpi surpassing the front by one-fourth the length of the head.
e. Color of fore wings brown with lighter markings *Crambodes, 48.*
ee. Color yellowish with black fringe - - - *Xanthoptera, 71.*
dd. Palpi surpassing the front by the length of the head.
e. Outer half of fore wings not rose color - - *Nolaphana, 49.*
ee. Outer margin of fore wings rose color - - *Prothymia, 72.*
ddd. Palpi scarcely, if at all, surpassing the front - - *Tarache, 65.*
ccc. Covering of thorax, hairs and scales.
d. Palpi porrect, surpassing the front by not more than one-half the length of the head.
e. End of fore wings oblique, apex acute - - - *Spragueia, 70.*
ee. End of fore wings not oblique, apex acute, the wing twice as long as broad, pale brown - - *Galgula, 73.*
dd. Palpi ascending; surpassing the front by one-half the length of head or less.
e. Fore wings not twice as long as broad, color drab *Remigia, 87.*
ee. Fore wings twice as long as broad, color vinous *Aletia, 50.*
ddd. Palpi ascending, surpassing the front by the length of head - - - - *Agnomonia, 84.*
4d. Palpi porrect; surpassing the front by the length of head - - - - - *Hypena, 102.*
5d. Palpi erect.

e. Surpassing the front by one half the length of head; apex of fore wings square - - *Epizeuxis, 96.*

ee. Surpassing the front by twice the length of head, apex of fore wings obtuse.

f. fore wings blackish - - *Pseudoglossa, 95.*

ff. Both wings ochraceous with two faint brown lines - - - - - - *Chytolita, 97.*

fff. Both wings ochraceous with two brown transverse shades and three lines - - - *Phalenophana, 100.*

4f. Brownish ochraceous, two faint brown lines, reniform dark brown - *Zanclognatha, 98.*

5f. Brownish ochraceous; distinct brown transverse shade; reniform not prominent - - - *Bleptina, 101.*

bbb. Abdomen shorter than hind wings, covering of thorax scales and hairs, apex of fore wings acute, brownish ochraceous species - - - *Hypena, 102.*

aa. Outer margin of fore wings dentate, or subdentate.

b. Abdomen longer than the hind wings.

c. Covering of thorax hairs and scales.

d. Palpi erect, surpassing the front by the length of head, hind wings coppery - - - - *Pyrophila, 34.*

dd. Palpi ascending.

e. Surpassing the front by less than one-half the length of head. outer margin a little oblique, apex obtuse.

f. Hind wings with broad black border containing a light spot - - - *Melipotis, 77.*

ff. Hind wings without distinct black border.

g. Fore wings without arcuate, reddish brown transverse lines - - - *Orthosia, 38.*

gg. Fore wings with arcuate, reddish brown transverse lines - - - - *Cosmia, 39.*

ee. Surpassing the front by the length of the head, outer margin not oblique, apex acute - - - *Celiptera, 83.*

ddd. Palpi porrect; surpassing the front by less than half the length of head.

e. Fore wings less than twice as long as broad.

f. Hind wings without distinct border - - - - *Glaea, 40.*

ff. Hind wings with distinct border. - - *Pyrrhia, 64.*

ee. Fore wings more than twice as long as broad - *Lithophane, 44.*

cc. Covering of thorax hairs.

d. Palpi porrect, surpassing the front by half the length of head or less, outer margin a little oblique, apex acute.

e. End of fore wings angled - - *Eucirroedia, 41.*

ee. End of fore wings round.
f. Fore wings with three oblique bands, the outer not close to the margin - - - *Chloridea, 60.*
ff. Fore wings without three bands - - *Heliothis, 61.*
dd. Palpi ascending.
e. End of fore wings rounded - - - *Xanthia, 43.*
ee. End of fore wings strongly angled - - *Scoliopteryx, 42.*
bb. Abdomen equaling hind wings.
c. Palpi ascending.
d. Surpassing the front by one half the length of head.
e. Apex of fore wings square.
f. With anteapical spots - - - - *Drasteria, 74.*
ff. Without anteapical spots - - *Panopoda, 86.*
ee. Apex of fore wings obtuse - - - *Litosea, 75.*
dd. Surpassing the front by the length of the head.
e. Apex of fore wings acute - - - - *Trama, 88.*
ee. Apex of fore wings obtuse - - *Homopyralis, 94.*
cc. Palpi porrect.
d. End of fore wings not oblique, apex square, color gray - - - - *Strenoloma, 81.*
dd. End of fore wings a little oblique, apex square, color drab - - - - - *Phoberia, 82.*
bbb. Abdomen shorter than the hind wings, palpi erect, outer margin straight, oblique, apex acute. - *Erebus, 89.*
aaa. Outer margin of the wing of males bifid, of females slightly angled; palpi erect, surpassing the front by twice the length of head; abdomen shorter than hind wings - - *Eulintneria, 103.*

**Eyes hairy.
A. Thorax and abdomen tufted, outer margin of fore wings dentate *Mamestra, 12.*
AA. Thorax tufted, outer margin of fore wings subdentate - *Nephelodes, 25.*
AAA. Thorax and abdomen without tufts.
a. Outer margin of fore wings entire, palpi porrect.
b. Transverse lines and stigmate not very distinct - - *Heliophila 32.*
bb. Transverse lines and stigmate distinct.
c. Outer margin brown - - - - *Orthodes, 35.*
cc. Outer margin bluish gray - - *Tæniocampa, 36.*
aa. Outer margin subdentate. - - - *Ipimorpha, 37.*

TABLE OF SPECIES.

1. PSEUDOTHYATIRA.

Pale gray moths, the fore wings tinged with reddish, thorax and abdomen tufted, posterior margin excavated before posterior angle. Expanse 1.75.

a. The base, the t. a. line, two spots on the costa and one at the posterior angle, heavy black - - -
P. Cymatophoroides, Guen.

aa. Lacking these heavy marks - - var, *Expultrix*, *Grt.*

2. HABROSYNE.

Brownish gray, pinkish white along the costa and outer margin, a silver spot on the basal half line, thorax and abdomen tufted, hind margin slightly tufted. Expanse 1.50 - - -
H. Scripta, Guen.

3. DIPHTHERA.

Pale green with seven black costal spots and six more or less triangular ones in the interior of fore wing. Expanse 1.35 -
D. Fallax, H.-S.

4. APATELA.

Gray or blackish gray, outer margin entire or slightly subdentate, more or less oblique, usually a psi mark near posterior angle, antennæ filiform, no tufts.

a. Color of fore wings gray, not heavily clouded with black.

b. Psi mark prominent.

c. Color yellowish gray, the t. p. line a series of scallops, a black dash at base. Expanse 1.50 - -
A. Occidentalis, G.-R.

cc. Color clear blueish gray, t. a. and t. p. lines faint.

d. With slender basal and subapical dashes. Expanse 1.75 - - - - - *A. Morula*, G.-R.

dd. With basal, subapical and central dashes. Expanse 1.80 - - - - *A. Lobeliæ*, Guen.

ccc. Color tinged a little with brownish, no distinct basal dash but a dark cloud in its place. Expanse 1.60
A. Spinigera, Guen.

4c. Color very pale gray, no dashes, the lines prominent only on the costa, hind wings whitish. Expanse 1.80 - - - *A. Lepusculina*, Guen.

bb. Psi mark not prominent.

c. Posterior wings smoky gray, paler at the base.

d. A dull black suffusion parallel with the hind margin. Expanse 1.25 - - - *A. Connecta*, Grt.

dd. Ferruginous gray, the center paler, the spots and lines blackish, hind wings whitish. Expanse 1.40
A. Rubricoma, Guen.

ddd. Whitish gray, center of fore wings paler, spots and lines indistinct, hind wings whitish. Expanse 1.25
A. Dissecta, G.-R.

4d. Clear gray, the center not pale, lines partially defined, black, hind wings whitish. Expanse 1.75 - -
A. Clarescens, Guen.

cc. Hind wings dull, smoky, black.

d. Clear gray, lines faint. Expanse 2.50 - - -
A. Americana, Harr.

dd. The gray tinged with pale ochre, a dark cloud in the middle of the t. a. and basal lines. Expanse 1.40 *A. Ovata*, Gr.

ddd. Fore wings dark gray, markings black, hind wings dark. Expanse 1.25 - - *A. Hamamelis*, Guen.

ccc. Hind wings white, fore wings narrow, pale gray. Expanse from 1.50 to 2.00 - - *A. Oblinita*, A.-S.

aa. Fore wings heavily marked with black.

b. The clear black, occupying most of the terminal space, the stigmata a space below these and the lower part of the t. a. line. Expanse 1.50 - *A. Noctivaga*, Gr.

bb. A black suffusion parallel with the hind margin and a broad transverse shade. Expanse 1. 85 - - - *A. Superans*, Guen.

bbb. Brownish black, spots and lines paler, hind wings sordid white. Expanse 1.75 - - *A. Afflicta*, Gr.

aaa. Sordid white, hind wings a little smoky, t. a. and subterminal lines and basal dash, the t. a. line broken. Expanse 1.30 - - - *A. Vinnula*, Gr.

5. ARSILONCHE.

Eyes naked, palpi porrect, short, fore wings entire, a little oblique, pale buff, a little pale brownish between some of the veins. Expanse 1.75 - - - - - - *A. Alborenosa*, G.

6. POLYGRAMMATE.

White, the lines and spots prominent, black, abdomen equal or but little exceeding the hind wings, outer margin entire, hind wings dark. Expanse 1.00 - - - - - *P. Hebraicum*, Hub.

7. MICROCOELIA.

Pale green, marks black, slender, a large black spot from the costa to between the stigmata. Expanse 1.25.

a. Transverse lines rather eistinct - *M. Diphteroides*, Guen.

aa. Lines obliterate - - - - - var. *Obliterata*, Gr.

8. BRYOPHILA.

Body slender, abdomen but little longer than the hind wings, fore wings subdentate, less than twice as long as broad, color greenish white, the basal half except the orbicular and a basal spot, black. Expanse 1.25 - - - - - - - *B. Lepidula*, Gr.

9. CHYTONIX.

Similar to the last in form, color greenish black, a large whitish spot in the center. Expanse 1.25 - - *C. Palliatricula*, Guen.

10. AGROTIS.

Eyes naked, without lashes, thorax and abdomen without tufts, middle and hind tibae spined, sometimes the anterior.

a. Color reddish brown, transverse lines but little darker, distinct no white olong the costa.

b. Dark brown spots before and between the stigmata.
c. Basal dash present.
d. Costa reddish ash, with dark brown spots at the beginning of t. a. and t. p. lines. Expanse 1.25 *A. Sigmoides*, Guen.
dd. Costa scarcely reddish, costal spots not prominent. Expanse 1.25 - - - - *A. Perattenta*, Gr.
cc. Basal dash absent, a dark brown ante-apical patch. Expanse 1.50 - - - - *A. Normaniana*, Gr.
bb. Inter stigmatal spot but little if any darker than the transverse shade.
c. No ante-apical dark brown spots. Expanse 1.60 - - *A. Phyllophora*, Gr.
cc. Three small anteapical dark brown spots. Expanse 1.60 *A. Baja*, S. V.
aa. Color purplish black, or reddish except the base and terminal portion.
b. A nearly triangular carneous patch from the middle of the costa back including the orbicular. Expanse 1.60 *A. C-nigrum*, L.
bb. A carneous patch inside the t. a. line and one outside the t. p. line. Expanse 1.60 - *A. Bicarnea*, Guen.
aaa. Color blackish gray, brownish white along the costa to beyond the reniform and above the median vein.
b. Hind wings smoky, fore wings dark blackish gray.
c. Stigmata, subterminal space and hind margin whitish. Expanse 1.90 - - - *A. Auxillaris*, Gr.
cc. Subterminal space and below the stigmata paler, terminal border of hind wings dark, the rest pale smoky. Expanse 1.50 - - - *A. Tricosa*, Lintn.
ccc. Subterminal space and below the stigmata some paler than the rest, nearly all of hind wings dark. Expanse 1.50 - - - - *A. Herilis*. Gr.
4c. All outside the t. p. line and an oblique spot from the orbicular purplish, the rest blackish gray, hind wings pale except the outer border. Expanse 1.40 *A. Obeliscoides*, Guen.
bb. Hind wings white with very little dark along the outer end.
c. Most of fore wings pale purplish gray, with some blackish spots. Expanse 1.30 - *A. Subgothica*, Haw.
cc. Fore wings nearly uniform reddish brown, black below the costal white. Expanse 1.15 - - *A. Plecta*, L.
4a. Color reddish brown, sprinkled with dark brown atoms, lines obliterate, dark brown if present, no white along costa.
b. Subterminal space not darker than the rest of wing.
c. A dark brown ante-apical spot. Expanse 1.25 to 1.60 *A. Cupida*, Gr.
cc. Color dark brown, ante-apical spot small, wing tinged with grayish. Expanse 1.50 - - - *A. Brunneicollis*, Gr.

bb. Subterminal space darker than the rest, the wings tinged with grayish, no ante-apical spot. Expanse 1.50 *A. Alternata*, Gr.

5a. Color uniform dark blackish or brownish gray, lines and spots obliterate.

b. Blackish gray, hind wings smoky, orbicular oblique. Expanse 1.60 - - - *A. Clandestina*, Harr.

bb. Almost black, hind wings white with veins and apical half of border smoky. Expanse 1.50 - - - *A. Velleripennis*, Gr.

bbb. Thorax and base of wings gray, shading into brownish gray, lines a series of scallops. Expanse 1.50 - *A. Fumalis*, Gr.

4b. Brownish gray, lines and spots mostly distinguishable, black in the outer part of reniform, hind wings dark smoky. Expanse 2.00 - *A. Haruspica* Gr.

6a. Color pale chocolate or ashy gray, the terminal space brown or ferruginous, hind wings white.

b. Terminal space, except the apex, ferruginous, reniform ferruginous with black atoms, t. p. line a series of black dots. Expanse 1.25 - *A. Incivis*, Guen.

bb. Terminal space brown, lines only visible on the costa, a few black scales in place of reniform. Expanse 1.25 - - - - *A. Lubricans*, Guen.

7a. Color brown tinged with gray or bluish gray, the stigmata at least distinct.

b. A broad black spot between the stigmata and before the orbicular.

c. Grayish brown, all the lines and transverse shade distinct, hind wings nearly uniform smoky. Expanse 1.40 - - - - *A. Tessellata*, Harr.

cc. Tinged with bluish gray, the lines not prominent, base of hind wings pale. Expanse 1.30 - - - *A. Redimicula*, Morr.

bb. A black line between the lower part of the stigmata and a small black spot before the orbicular, hind wings whitish.

c. Pale brown with a basal dash. Expanse 1.25 - - *A. Rudens*, Harv.

cc. Dark brown, pale along the costa to the reniform. Expanse 1.60 - - - - *A. Annexa*, Tr.

bbb. No prominent black spot between the stigmata, hind wings pale, smoky with dark outer border.

c. Uniform grayish brown tinged with buff, lines, spots and shade distinct. Expanse 1.60 - - - - *A. Messoria*, Harr.

cc. Dark grayish brown, darkest along the costa, a dark lance from, reniform nearly meeting two from the subterminal line. Expanse 1.75 - - - *A. Ypsilon*, Rott.

ccc. Grayish brown, orbicular paler, tinged more or less

with buff along the costa and in the subterminal space. Expanse 2.00 - - *A. Saucia*, Hub.

8a. Color pale bluish gray tinged with brown in the center and a little in subterminal space, hind wing smoky, lines brownish black. Expanse 2.35 - - - *A. Occulta*, Hub.

9a. Color yellowish green, spots and veins gray, a white patch outside the reniform, hind wings smoky black. Expanse 2.15 - - - *A. Prasina*, Fabr.

11. ANYTUS.

Eyes naked, thorax and abdomen tufted, palpi ascending, short, wings dentate, gray shaded with black along the submedian vein. Expanse 1.40 - - - - - - - *A. Sulptus*, Gr.

12. MAMESTRA.

Eyes hairy, thorax with dorsal posterior tufts, abdomen more or less distinctly tufted, all the tibiæ without spines.

a. Subterminal line making an M in its middle when seen from the base.

b. Color ash gray, more or less tinged with yellow or brown.

c. Not white along the costa.

d. Stigmata prominent, whitish, terminal space pale with black terminal lunules. Expanse 1.90 - - *M. Imbrifera*, Guen.

dd. Stigmata pale brownish as also the subterminal space, terminal and substigmatal spaces dark. Expanse 1.75 - - - - - *M. Grandis*, Bd.

ddd. Stigmata concolorous with the base and terminal space, median space with black below the stigmata, three terminal arrows projecting inward. Expanse 1.25 - - *M. Capsularis*, Guen.

4d. Nearly uniform brownish gray with a slight yellowish tinge, lower part of reniform blackish, base of hind wings pale. Expanse 1.35 - - - *M. Trifolu*, Rott.

cc. Pale gray with distinct reddish brown tinge, whitish along the costa. Expanse 1.40 - - - *M. Atlantica*, Gr.

bb. Color dark gray.

c. Tinged with purple, a reddish costal spot at the base and another outside the reniform. Expanse 1.75 - *M. Subjuncta*, G.-R.

cc. Blackish gray, stigmata and terminal space whitish, subterminal M not very distinct. Expanse 1.40 *M. Adjuncta*, Bd.

aa. Subterminal line not making an M, or if it does, it is very obscure.

b. Color brown or brownish yellow.

c. Browish yellow, darker through the middle. Expanse 1.25 - - - - - *M. Lorea*, Guen.

cc. Uniform dark reddish brown, fore wings narrow, reniform gray, hind wings pale yellowish. Expanse 1.50 - - - - - - *M. Picta*, Harr.

ccc. Dark reddish brown sprinkled with gray, hind wings dark. Expanse 1.30 - - *M. Meditata*, Gr.

bb. Gray, light or dark.

c. Pale gray, tinged a little with purplish.

d. Clouded with black between the basal and t. a. lines, and along the costa above the stigmata, Expanse 1.60 *M. Latex*, Guen.

dd. Brownish over the anterior half to near the apex, lower part of reniform blackish, claviform dark brown. Expanse 1.35 - *M. Legitima*, Gr.

ddd. Middle of wing pale brownish, stigmata pale, claviform barely discernable. Expanse 1.40 - - *M. Lustralis*, Gr.

cc. Dark gray.

d. Hind wings black, prominent black claviform. Expanse 1.20 - - - *M. Detracta*, Wlk.

dd. Hind wings whitish with black outer border.

e. Posterior part of fore wings from the costa near the base to the posterior angle pale gray. Expanse 1.30 - - - - - *M. Distincta*, Hub.

ee. Suffused with pale gray, hind wings almost white. Expanse 1.30 - - - - *M. Vicina*, Gr.

eee. Reniform, a spot near the base and one near the posterior angle pale green. Expanse 1.20 - - *M. Renigera*, Steph.

4e. Dark blackish gray, slightly tinged with olivaceous reniform and terminal space a little paler, hind wings with broad dark border. Expanse 1.00 - *M. Olivacea*, Morr.

13. LUCERIA.

Eyes naked, thorax tufted in front but scarcely behind, abdomen slightly tufted, lines obliterate, stigmata of the same color as the rest of wing, annulate with black, claviform black. Expanse 1.65 - - - - - - - - - - *L. Passer*, Guen.

14 HADENA.

Eyes naked, thorax with divided dorsal longitudinal and posterior tufts, abdomen more or less distinctly tufted, all the tibiæ armed.

a. Subterminal line not making an M in its middle.

b. Color dark brownish gray.

c. Stigmata partly annulate with white, concolorous, lines dark brown. Expanse 1.65- - - - - - *H. Devastatrix*, Brace.

cc. Stigmata and lines indistinct, two more or less distinct small dark brown spots below the stigmata. Expanse 1.15 - - - *H. Vulgivaga*, Morr.

bb. Color dark brown with or without a wine tinge.

c. Very dark with a distinct wine shade, lines obliterate, reniform and sometimes orbicular with pale scales. Expanse 1.75 - - - *H. Sputatrix*, Gr.

cc. Clear brown, darker patches about the stigmata and two in the terminal space, very few pale scales in the outer part of reniform. Expanse 1.75 - - - *H. Apamiformis*, Guen.

bbb. Color gray, the center of wing and clouding at base wine color. Expanse 1.85 - - *H. Arctica*, Bd.

4b. Color pale brown.

c. Basal two-thirds strongly clouded with dark brown, lines dark brown. Expanse 1.40 - - - - *H. Mactata*, Guen.

cc. Slight olivaceous tinge, a black patch across the middle of wing. Expanse 1. 25 - - *H. Modica*, Guen.

5b. Collor yellowish green, veins gray and lines black, reniform large, white or whitish. Expanse 1.35 - - *H. Miselioides*, Guen.

aa. Subterminal line making an M in its middle as seen from the base.

b. Color reddish brown.

c. Uniform reddish brown with darker shadings. Expanse 1.80 - - - - *H. Lignicolor*, Guen.

cc. Costal part paler, posterior margin gray, preceded by dark brown. Expanse 1.40 - - - - *H. Verbascoides*, Guen.

bb. Color grayish brown.

c. The veins and two terminal shades and one below stigmata dark brown. Expanse 1.75 - - - *H. Vulgaris*, G.-R.

cc. Costal and posterior margins suffused with gray, shadings and marks dark brown. Expanse 1.50 - - *H. Cariosa*, Guen.

15. OLIGIA.

Similar to Hadena, but differs in the abdomen, not being tufted, or if tufted only at the extreme base.

a. Base of wings spotted with yellowish brown, a white shading outside the t. p. line. Expanse 1.15 - - *O. Chalcedonia*, Hub.

aa. But little shading darker than the ground color, dark brown or black spot outside the reniform. Expanse 1.00 *O. Arna*, Guen.

16. PERIGEA.

Eyes naked, thorax and abdomen tufted, body moderately robust, abdomen equaling or passing slightly beyond the hind wings, palpi ascending.

a. Color saffron yellow, mottled with brown, stigmata concolorous. Expanse 1.10 - - *P. Xanthioides*, Guen.

aa. Color dark brownish gray.

b. Lines moderately distinct, lower part of reniform white. Expanse 1.30 - - - - - *P. Luxa*, Gr.

bb. Lines obliterate, reniform with very few if any white scales. Expanse 1.20 - - *P. Fabrefacta*, Morr.

17. DIPTERYGIA.

Eyes naked, thorax and abdomen tufted, palpi porrect, color blackish brown with a clear patch at posterior angle. Expanse 1.50 *D. Scabriuscula*, L.

18. HYPPA.

Eyes naked, thorax and abdomen tufted, palpi ascending, color gray, a dark brown stripe near the hind margin between the t. a. and t. p. lines, shading out towards the middle of the wing. Expanse 1.60 - - - - - - - *H. Xylinoides*, Guen.

19. ACTINOTIA.

Eyes naked, thorax and abdomen tufted, palpi ascending, pale gray, a brown shade from the base to the reniform where it divides and goes to the apex and posterior angle, veins and terminal zigzag line white. Expanse 1.25 - - - *A. Ramosula*, Guen.

20. LAPHYGMA.

Eyes, thorax, abdomen and palpi as in the preceding; wings narrow, hind wings white, iridescent, an oblique pale mark from upper part of orbicular to below reniform; outer margin entire, only slightly oblique.

a. Color gray with a brownish tinge more distinct posteriorly, apex whitish. Expanse 1. 40 - - - - *L. Frugiperda*, A.-S.

aa. Less brown, no white at apex and oblique mark indistinct var. *Obscura*, Riley.

21. PRODENIA.

Eyes naked, thorax and abdomen tufted, palpi porrect, outer margin subdentate, an oblique light mark from upper part of orbicular to below the reniform, a white apical spot.

a. Color vinous gray marked with black brown, hind margin ashy, fore wings very long. Expanse 1.75 - - *P. Commelinæ*, A.-S

aa. Color dark gray marked with black brown.

b. Wing distinctly yellowish in the middle below the oblique mark. Expanse 1.50 - - *P. Flavimedia*, Harv.

bb. Center of wing not yellow below the oblique mark. Expanse 1.50 - - - *P. Lineatella*, Harv.

22. TRIGONOPHORA.

Eyes naked, thorax tufted, palpi ascending, wing subdentate, color reddish brown, a brown space across the middle between the lines making a rude V anteriorly. Expanse 1.75 - - - *T. Periculosa*, Guen, var. *V-Brunneum*, G.

23. EUPLEXIA.

Eyes naked, thorax and abdomen tufted, palpi ascending, wings entire; middle third of fore wings blackish brown, purplish on the basal third, the outer third pale with a purplish tinge, reniform whitish. Expanse 1.25 - - - - *E. Lucipara*, L.

24. BROTOLOMIA.

Eyes naked, thorax and abdomen tufted, palpi ascending, wings dentate, outer margin oblique; dark olive green, pale at base and outside the t. p. line, purple on stigmata and terminal space. Expanse 1.65 - - - - - - - - *B. Iris*, Guen.

25. NEPHELODES.

Eyes hairy, thorax tufted, palpi ascending, wings subdentate; reddish brown, a brown patch between the t. a. and t. p. lines not reaching the costa, stigmata the ground color.

a. Pale reddish brown. Expanse 1.80 - - - - *N. Minians*, Guen.

aa. Dark reddish brown. Expanse 1.75 to 1.90 - - - var. *Violans*, Guen.

26. HELOTROPHA.

Eyes naked,thorax and abdomen tufted, palpi porrect, wings subdentate, tibiæ unarmed; color brownish black, subterminal space pale, the reniform annulate with white, the white extending into the median vein and veins three and four. Expanse 1.75 - - *H. Reniformis*, Gr.

27. APAMEA.

Similar to Gortyna. This genus contains the yellowish or reddish brown species with the stigmata similiarly colored.

a. Quite heavily shaded with dark brown, the stigmata faintly annulate with gray. Expanse 1.25 to 1.40 - - *A. Sera*, G.-R.

aa. Rather pale, brown lines distinct, reniform ochraceous or whitish. Expanse 1.05 to 1.30 - - - *A. Nictitans*, Bkh.

aaa. Lines brown, pale outside the t. p. line, stigmata of the ground color. Expanse 2.20 - - - - *A. Immanis*, Guen.

28. GORTYNA.

Eyes naked, thorax and sometimes abdomen tufted, palpi porrect, wings dentate, apex acute, fore wings nearly oblong; males smaller than the females.

a. Color ferruginous, melting to violet brown, veins and median shade violet brown, yellow apical spot, reniform large, white, a white basal spot. Expanse 1.85 - *G. Marginidens*, Guen.

aa. Color wood brown.

A spot at base, stigmata, two spots below the orbicular and

one at apex yellow, middle washed with yellow. Expanse 1.75 - - *G. Cataphracta*, Gr.

bb. Stigmate concolorous with the wing, t. p. line whitish, pale outside this line. Expanse 1.10 to 1.60 - - *G. Nitela*, Guen.

bbb. Stigmata white or yellowish white, reniform a cluster of dots.

c. Color, t. p. line and subterminal space the same as in *Nitela* - - *G. Nitela*, var *Nebris*, Guen.

cc. Two white dots below the orbicular and one basal, middle of wing clear brown. Expanse 1.80 - - - G. *Cerussata*, Gr.

ccc. Two white dots below the orbicular, center and apex yellow. Expanse 1.50 - - *G. Rutila*, Guen.

29. ACHATODES.

Eyes naked, thorax and abdomen tufted, palpi ascending, but very little surpassing the front, wings entire. Color rust red mottled with gray, a tawny spot at the apex. Expanse 1.30 - - - *A. Zeae*, Harr.

30. SPHIDA.

Eyes naked, thorax and abdomen tufted, palpi ascending, short, wings entire, long, oblique, the stigmata oblique; color buffy brown, gray along the costa below which the brown is more prominent, outer border purplish, stigmata inclining to fulvous. Expanse 2.00 - - - - - - - *S. Oblipuata*, G.-R.

31. SCOLEOCAMPA.

Eyes naked; palpi porrect, wings entire, costa scarcely longer than the hind margin; color pale buff, only t. p. and subterminal lines present and these indistinct, reniform blackish, a blackish spot beyond in the terminal space, two black dots on subcostal vein. Expanse 1.50 - - - - - - - *S. Liburna*, Geyer.

32. HELIOPHILA.

Eyes hairy, palpi porrect, surpassing the front by half the length of head, wings entire.

a. Color pale buff.

b. Scarcely any brown tinge below the median vein; a black dot at the end of the median vein and on veins 1 and 4. Expanse 1.30 to 140 - - *H. Pallens*, L.

bb. Median vein white, a brown shade below median vein, along the costa, in the outer margin and from this to end of discal cell. Expanse 1.40 - - - *H. Albilinea*, Hub.

bbb. Median vein white, brown shade below this with mere traces of brown shading between the veins in subterminal space, very faint subterminal row of black dots. Expanse 1.50 - - - *H. Phragmitidicola*, Guen.

aa. Color fawn.

b. With black brown longitudinal marks.

c. Mark at base below median vein, brown shadings over the wing, the t. p. line a row of black dots on the veins. Expanse 1.40 - - - *H. Adonea*, Gr.

cc. Mark below median vein, two short ones near, hind margin, with umber shadings above median vein and end of wing. Expanse 1.45 - - - *H. Commoides*, Guen.

bb. No black brown marks.

c. Stigmata yellowish, a white dot on the end of median vein, a brown shade below the apex. Expanse 1.75 *H. Unipuncta*, Haw.

cc. Pale fawn, stigmata a little paler, lines moderately distinct, three faint brownish shades before, between and after the stigmata and below the apex. Expanse 1.60 - - - *H. Pseudargyria*, Guen.

33. CARADRINA.

Eyes naked, palpi porrect, wings entire, rounded.

a. Color reddish brown, lines whitish, orbicular black, annulate with gray, reniform constricted, black at the ends the rest buffy gray. Expanse .95 - - *C. Rasilis*, Morr.

aa. Color gray, basal two-thirds buffy, stigmata and lines blackish. Expanse 1.30 - - - *C. Multifera*, Wlk.

34. PYROPHILA.

Eyes naked, palpi erect, surpassing front by the length of head, wings dentate, nearly oblong; blackish brown pale beyond the t. p. line, hind wings coppery except along the costa. Expanse 1.75 to 1.95 - - - - - - - *P. Pyramidoides*, Guen.

35. ORTHODES.

Eyes hairy, palpi porrect, short, wings nearly oblong, entire, rounded.

a. Blackish brown, lines and outlines of stigmata buffy. Expanse 1.25 - - - - - - - - *O. Infirma*, Guen.

aa. Gray, slightly brownish with a very faint violet tinge, four dark brown spots, one at base and three on submedian vein. Expanse 1.25 - - *O. Cynica*, Guen.

36. TAENIOCAMPA.

Eyes hairy, palpi porrect, short, wings entire, apex slightly produced.

a. Reddish brown, rather dark, t. a. and t. p. lines gray, outlines of stigmata and end of wing buffy. Expanse 1.20 *T. Oviduca*, Guen.

aa. Reddish brown, basal third and end of wing suffused with bluish gray. Expanse 1.45 - - *T. Incerta*, Hub.

37. IPIMORPHA.

Eyes hairy, palpi porrect, short, wings subdentate, apex scarcely produced; color brown, rather pale, buffy tinted posteriorly, lines lighter, stigmata paler, reniform a little blackish in lower part. Expanse 1.30 - - - - - - - *I. Pleonectusa*, Gr.

38. ORTHOSIA.

Eyes naked, palpi ascending, short, wings subdentate, apex slightly produced.

a. Brownish fulvous, marks brown, reniform black in lower half, hind wings smoky black. Expanse 1.55 - - - *O. Helva*,Gr.

aa. Brownish yellow, lines and shades brown, a little black in the reniform, hind wings smoky. Expanse 1.35 - - *D. Ferrugineoides*, Guen.

aaa. Reddish ferruginous, marks and lines black, hind wings blackish. Expanse 1.15 . - - - - - *O. Aurantiago*, Geun.

39. COSMIA.

Similar to Orthosia, but differs in the transverse lines, being smoothly arcuate and reddish brown, while in Orthosia they are composed of small scallops; color ochreous yellow, hind wings yellowish. Expanse 1.70 - - - - *C. Infumata*, Gr.

40. GLAEA.

Eyes naked, palpi porrect, short, wings dentate, oblong, hind wings blackish, with a more or less distinct reddish tinge to the fringe.

a. Reddish ferruginous tinged a little with brown, lines not distinct. Expanse 1.80 - - - *G. Viatica*, Gr.

aa. Wood brown.

b. Stigmata very large, their outlines and subterminal space reddish brown, basal, t. a. and t. p. lines dark brown. Expanse 1.70 - - - - - *G. Inulta*, Gr.

bb. Stigmata of moderate size, lower part of reniform black, lines and shades brown of a slightly reddish cast. Expanse 1.50 - - *G. Anchocelioides*, Guen.

41. EUCIRRŒDIA.

Eyes naked, palpi porrect, wings dentate, apex produced, outer margin angled; color saffron yellow tinged and shaded with reddish brown, hind wings reddish brown, pale at base. Expanse 1.60 *E. Pampina*, Guen.

42. SCOLIOPTERYX.

Eyes naked, palpi ascending, wings dentate, outer end strongly angled; carneous gray, costa whitish, reddish in terminal space, lines white, basal and discal spots yellow. Expanse 1.75 - - *S. Libatrix*, L.

43. XANTHIA.

Eyes naked, palpi ascending, wings subdendate, rounded, lemon yellow, subterminal space and two costal patches reddish brown. Expanse 1.20 - - - - - - - *X. Togata*, Esp.

44. LITHOPHANE.

Eyes naked; palpi porrect, short; wings subdentate, rounded, narrow.

a. Color rusty brown, ashy along the costa and stigmata. Expanse 1.50 - - - - - *L. Ferrealis*, Gr.

aa. White, marked and shaded with brownish yellow, black atoms on the veins in place of the transverse lines. Expanse 1.45 - - - *L. Bethunei*, G.-R.

aaa. Color gray, orbicular extends below the median vein, often double, wing shaded in the middle with brown, lines indistinct, subterminal a series of angular dots.

b. Reniform gray. Expanse 1.32 to 1.82 - - - *L. Antennata*, Wlk.

bb. Reniform stained with red. Expanse 1.40 to 1.80 - - *L. Laticineriea*, Gr.

45. LITHOMIA.

Eyes naked, thorax tufted; palpi porrect, short; wings subdentate, narrow, outer margin oblique: color gray, reniform whitish with black and white annulations, a prominent blackish transverse shade. Expanse 2.00 - - - - - *L. Germana*, Morr.

46. CALOCAMPA.

Eyes naked, thorax and abdomen tufted, palpi porrect, very short, wings entire, oblong, narrow; yellowish brown, paler anteriorly, marked with black brown dashes through the middle of wing.

a. Reniform distinct, a dash extending from it outward. Expanse 2.25 - - - *C. Nupera*, Lintn.

aa. Orbicular with a curved mark each side of it. Expanse 1.75 to 190 - - *C. Curvimacula*, Morr.

47. CUCULLIA.

Eyes naked, palpi porrect, short, wings entire, narrow, outer margin oblique, costa falcate.

a. Gray, brown along costal and hind margins, curved mark near posterior angle. Expanse 1.75 - - - *C. Asteroides*, Guen.

aa. Gray, marks obliterate. Expanse 1.85 - - - - *C. Intermedia*, Spey.

48. CRAMBODES.

Eyes naked; palpi porrect, short; wings entire, moderately broad, outer margin rounded; dark brown streaked with buff, reniform buff. Expanse 1.10 - - - *C. Talidiformis*, Guen.

49. NOLAPHANA.

Eyes naked, palpi porrect, surpassing the front by the length of the head, wings entire, broad; gray, white along the costa, the lines black. Expanse 1.10 - - - *N. Malana*, Fitch.

50. ALETIA.

Eyes naked, palpi ascending, wings entire, triangular, apex produced, color vinous, slightly olivaceous, reniform two contiguous gray spots circled with black, lines reddish brown, not very distinct. Expanse 1.35 - - - - *A. Argillacea*, Hub.

51. MARASMALUS.

Eyes naked, palpi ascending, surpassing the front by the length of head, wings entire, rounded; olivaceous gray tinged with reddish brown at base and apex, pale gray posteriorly, lines faint. Expanse 1.10 - - - - - - *M. Histrio*, Gr.

52. INGURA.

Eyes naked, thorax tufted, palpi porrect, surpassing the front by the length of head, wings entire, rounded.

a. Dark gray, lines black, two black marks near the apex. Expanse 1.20 - - *I. Abrostoloides*, Guen.

aa. Dark gray, black Y mark at base and curved black double line from hind margin to below the apex, the enclosed space containing a white spot, white above both marks. Expanse 1.00 - *I. Oculatrix*, Guen.

53. CALPE.

Eyes naked, palpi porrect, surpassing the front by twice the the length of head, wings entire, blunt angled, apex produced, hind margin with prominent projection at end of basal third; color fawn tinged with olivaceous, crossed by an oblique line from apex and a great number of short fine white lines. Expanse 1.40 - - *C. Canadensis*, Beth.

54. PLUSIODONTA.

Eyes naked, palpi ascending, compressed, surpassing the front by the length of head, wings entire, a prominent projection on hind margin near the middle; purplish between t. a. and t. p. lines and at base the rest yellow with golden marks and a white mark from apex down. Expanse 1.15 - - *P. Compressipalpis*, Guen.

55. HYPSOROPHA.

Eyes naked, palpi porrect, surpassing the front by twice the length of head, wings entire; purplish gray except along the costa and subterminal space which are blackish, three silver spots along the t. p. line from hind margin towards the costa. Expanse 1.20 *H. Hormos*, Hub.

56. TELESILLA.

Eyes naked, thorax and abdomen tufted, palpi ascending, short

wings entire, rounded; purplish gray, a lilac stripe outside the t. p. line. Expanse 1.10 - - - - - *T. Cinereola*, Guen.

57. ABROSTOLA.

Eyes naked, thorax tufted, palpi ascending, surpassing the front by by the length of the head, wings entire; gray tinged with violet, large carneous spot at base, whitish at posterior angle. Expanse 1.45 - - - - - - - *A. Urentis*, Guen.

58. PLUSIA.

Eyes naked, thorax and abdomen tufted, palpi ascending, short, wings entire, triangular, apex a little produced, hind margin more or less excavated before posterior angle.

a. Without silver spots in the middle of fore wings.

b. Olive brown, t. p. line regularly arched outside the reniform. Expanse 1.40 - - *P. Aereoides*, Gr.

bb. Violet brown, t. p. line wavy outside the reniform. Expanse 1.60 - - - - - *P. Aerea*, Hub.

aa. With silver marks in the middle of fore wings.

b. Fulvous gray tinged with brown.

c. Longitudinal silver spot bilobed in front, parts of t. a. and basal lines and reniform silvery. Expanse 1.50 *P. Biloba*, Steph.

cc. Silver mark in two parts, basal and t. a. lines and reniform with some silver. Expanse 1.50 - - *P. Dyaus*, Gr.

bb. Purple, marked with fulvous below the silver spot and end of wing, silver mark somewhat 8 shaped. Expanse 1.50 - - - *P. Precationis*, Guen.

bbb. Gray, tinged more or less with purplish.

c. Silver spot a dot and a V like open mark, color purplish gray. Expanse 1.35 to 1.50 - - *P. Ou*, Guen.

cc. Silver mark united but open posteriorly, some silver in the ordinary lines; color blackish gray with little purple. Expanse 1.30 - - *P. Ni*, Hub.

ccc. Outlines of silver mark straight anteriorly but angled posteriorly. Expanse 1.30 - - - - *P. Oxygramma*, Gey.

4c. Silver mark elbowed beyond which it divides, the basal part curving backward to the hind margin. Expanse 1.40 - - - - - - *P. Simplex*, Guen.

59. SCHINIA.

Eyes naked, palpi porrect, surpassing the front by about one-fourth the length of head, wings entire, triangular, apex moderately obtuse.

a. Olivaceous, crossed by three silvery lines, each bent before reaching the costa, golden gloss in terminal space. Expanse 1.35 - - - *S. Gulnare*, Streck.

aa. Fore wings green crossed by three oblique white lines, the outer next the margin, hind wings white with a little

blackish at outer margin. Expanse 1.10 - - - *S. Trifascia*, Hub.

60. CHLORIDEA.

Eyes naked, palpi porrect, wings subdentate, triangular; green with three oblique pale lines, hind wings reddish brown on outer border. Expanse 1. 15 - - - - - *C. Rhexiae*, A.-S.

61. HELIOTHIS.

Eyes naked, palpi porrect, short, wings subdentate, moderately broad, rounded, hind wings whitish with black outer border having a pale spot in its middle.

a. Buff, transverse shade brownish, reniform black, a brown spot on costa above the reniform and before the apex, discal spot of hind wings large. Expanse 1.30 - - - - - *H. Phlogophagus*, G.-R.

aa. Clay yellow, males with an olive tint, no costal spots. Expanse 1.65 - - - *H. Armiger*, Hub.

62. LYGRANTHOECIA.

Eyes naked, palpi porrect, short, wings entire, rounded; color dark grayish brown, the median space gray the outer boundary of which is a well marked compound curve, the inner arcuate, hind wings black. Expanse 1.10 - - - - - - - *L. Rivulosa*, Guen.

63. ANTHOECIA.

Similar to the preceding in form; color dark brown with a slight yellow tinge, median space pale, the outer boundary nearly straight, the inner arcuate, hind wings yellow with a broad black border. Expanse 1.05 - - - - - *A. Spraguei*, Gr.

64. PYRRHIA.

Eyes naked, palpi porrect, very short, wings subdentate; color saffron yellow marked and shaded with reddish brown, hind wings with a reddish brown border. Expanse 1.35 - - - *P. Exprimens*, Wlk.

65. TARACHE.

Eyes naked, palpi porrect, surpassing the front by the length of the head, wings entire, but little rounded, outer margin somewhat oblique.

a. Dark gray, purplish outside the t. p. line, two large white costal patches. Expanse 1.15 - - - *T. Aprica*, Hub.

aa. White, inclining to yellowish, end of wing lead color, darker posteriorly and tinged with olive, reniform annulate with white.

b. One costal spot. Expanse .80 - *T. Candefacta*, Hub.

bb. Five costal spots. Expanse .80 - - - - - *T. Erastrioides*, Guen.

66. LITHACODIA.

Eyes naked, thorax and abdomen tufted, palpi ascending, wings entire, moderately broad and rounded; gray, a white V mark below the reniform, open toward outer margin, reniform and terminal space yellowish brown. Expanse .80 - - *L. Bellicula*, Hub.

67. CHAMYRIS.

Eyes naked, thorax and abdomen tufted, palpi ascending, short, wings entire, rounded, moderately long; color white olivaceous gray, marked with black at base and outer margin, transverse shade bluish. Expanse 1.15 - - - - - *C. Cerintha*, Tr.

68. EUSTROTIA.

Eyes naked, thorax and abdomen tufted, palpi ascending, wings entire, triangular somewhat rounded at the end; dark except at the end of wings.

a. Blackish gray, end of wing and an oblique line from the costa to meet this pale carneous. Expanse 1.00 - - *E. Carneola*, Guen.

aa. Black gray, end of wing and reniform dark carneous. Expanse 1.00 - - - *E. Apicosa*, Haw.

aaa. Olive gray, lines black, stigmata and end of wing gray. Expanse .85 - - - *E. Muscosula*, Guen.

69. EUHERRICHIA.

Eyes naked, thorax and abdomen tufted, palpi ascending; color reddish brown with silver spots.

a. A few silver scales in the stigmata, a rosy band outside the t. p. line and one inside the t. a. line. Expanse .95 *E. Mollissima*, Guen.

aa. With seven silver spots and the subterminal line silver lunules. Expanse 1. 10 - - *E. Monetifera*, Guen.

70. SPRAGUEIA.

Eyes naked, palpi porrect, short, wings entire, somewhat oblong, outer margin a little oblique; color two longitudinal stripes of black alternating with two of white, three black costal spots and three more or less distinct transverse bands of fulvous. Expanse .65 - - - - - - - - - - *S. Leo*, Guen.

71. XANTHOPTERA.

Eyes naked, palpi porrect, short, wings entire, triangular; pale yellow with a black fringe. Expanse .85 - - - - *X. Nigrofimbria*, Guen.

72. PROTHYMIA.

Eyes naked, palpi porrect, supassing the front by the length of the head, wings entire, rounded; basal half of fore wings pale yellow, outer part and portion of costa rose red. Expanse .85 - - *P. Rosalba*, Gr.

73. GALGULA.

Eyes naked, palpi porrect, surpassing the front by half the length of the head, wings entire; reddish brown, outlines of stigmata and t. p. line yellowish, subterminal space paler than the rest of wing and containing a row of black dots on the veins. Expanse .90
G. Subpartita, Guen.

74. DRASTERIA.

Eyes naked, palpi ascending, wings dentate, broad, triangular; color gray with shades of brown from the lines out, or brown with similar shades of darker brown, black brown ante-apical spot composed of an oblong and a triangular piece, two brown lines to hind wings. Expanse 1.40 to 1.60 - - - *D. Erechtea*, Cram.

75. LITOSEA.

Eyes naked, palpi ascending, antennæ of male pectinate, wings subdentate; drab, faint grayish brown lines, one brown transverse line to hind wings, fore wings with subterminal row of black dots beyond which they are gray. Expanse 1.35 - - -
L. Convalescens, Guen.

76. EUCLIDEA.

Eyes naked, thorax and abdomen tufted, palpi ascending, wings dentate, triangular; gray, terminal space pale, transverse shade brown gray, three transverse black brown marks, one in the region of the t. a. line, one the t. p. and one ante-apical. Expanse 1.30
- - - - - - - - - - *E. Cuspidea*, Hub.

77. MELIPOTIS.

Eyes naked, palpi ascending, wings dentate; deep violet gray, variegated with brown and clear gray, one oblique band of yellowish white, with two fine reddish lines and a large angular spot. Expanse 1.40 - - - - - - - *M. Limbolaris*, Gey.

78. CATOCALA.

Eyes naked, thorax, and in most cases, abdomen tufted, palpi ascending, wings dentate; fore wings some tint of gray shaded with brown or black, or the prevailing color brown shaded with gray, hind wings uniform black or black with a white band through the middle, or some shade of red or yellow with one or two black bands. On the under side the wings are banded with black and either white or the ground color of the hind wings.

With the exception of the following varieties and species found to be in the State since the publication of the "Synopsis of the Catocalæ of Illinois," the descriptions of the species of this genus will be found in that paper.

C. Robinsonii var *Curvata*, French. Of the same color as the species with a curved black shade from the middle of the costa to the outer margin below the apex, and a very slender basal dash. Expanse 2.50.

C. Palaeogama var *Amnida*, Fager. This varies from the usual form in the posterior part to the submedian vein, and the terminal

space except in the middle, being suffused with blackish brown, often the base also.

C. Cordelia, Hy. Edw. Color sordid white with a greenish tinge, subterminal space brown, except at costa, inside the t. a. line and a costal patch, including the reniform blackish with a scattering of olive scales, terminal space gray, median band of hind wings not recurrent, outer band broken before anal angle. Expanse 1.75. This should follow *C. Amasia* in classification.

79. ALLOTRIA.

Eyes naked, thorax tufted, palpi ascending, surpassing the front by the length of head, wings entire, color gray, whitish medially and blackish at base, hind wings yellow with heavy black outer border. Expanse 1.45 - - - - - *A. Elonympha*, Hub.

80. PARTHENOS.

Eyes naked, palpi ascending, surpassing the front by one and a half times the length of the head, wings dentate; fore wings gray, hind wings yellow with four irregular black bands. Expanse 2.50 - - - - - - - - - - *P. Nubilis*, Hub.

81. STRENOLOMA.

Eyes naked, palpi porrect, short, wings dentate, broad, rounded at the end; both wings gray with a faint purplish tint, four black brown costal patches, a double line from posterior and inner margins extending to the middle of the wings, transverse lines dots on the veins. Expanse 1.80 - - - - - *S. Lunilinea*, Gr.

82. PHOBERIA.

Eyes naked, palpi porrect, short, wings subdentate, moderately broad; ochraceous, subterminal space brownish, quite dark on costal half, stigmata brown. Expanse 1.45 - - *P. Atomaris*, Hub.

83. CELIPTERA.

Eyes naked, palpi ascending, surpassing the front by the length of the head, wings dentate; gray, subterminal blackish lines shaded with yellow, t. a. line more or less black, on the hind margin a black spot towards the base usually connected with this line. Expanse 1.65 to 1.75 - - - - - *C. Frustulum*, Guen.

84. PARALLELIA.

Eyes naked, palpi ascending, surpassing the front by the length of the head, wings entire, broad; dark brownish gray, pale terminally, two parallel transverse brown lines. Expanse 1.50 - - - *P. Bistriaris*, Hub.

85. AGNOMONIA.

Eyes naked, palpi ascending, surpassing the front by the length of the head, wings broad; brownish black, two oblique white lines from the costa outward, the second not reaching the outer margin. Expanse 1.35 - - - - - *A. Amilis*, Drury.

86. PANOPODA.

Eyes naked, palpi ascending, wings subdentate, rather broad, rounded but the apex square; color gray.

a. Yellowish gray, two reddish brown transverse lines to the fore wings, one to the hind wings, costa and collar reddish brown. Expanse 1.70 - - - -
P. Rufimargo, Hub.

aa. Purplish gray, two blackish transverse lines to the fore wings, one to the hind wings; costa carneous, stigmata black. Expanse 1.80 - - - -
P. Carneicosta, Guen.

87. REMIGIA.

Eyes naked, palpi ascending, short, wings entire, broad triangular; color gray.

a. Slightly purplish gray, two transverse brown lines, no lines on the hind wings. Expanse 1.60 to 1.80 - -
R. Hexastylus. Harv.

aa. Yellowish gray, two transverse brown lines, the second shaded outwardly, two shaded lines to the hind wings. Expanse 1.90 - - - *R. Latipes*, Guen.

88. TRAMA.

Eyes naked, palpi ascending, surpassing the front by the length of the head, wings subdentate, broad, end rounded, apex a little produced; color of both wings dark brown, tinged with gray to a subterminal oblique line; t. p. line faint, pale, strongly arcuated opposite the reniform. Expanse 1.05 to 1.20 - - -
T. Arrosa, Harv.

89. EREBUS.

Eyes naked, palpi erect, rather long, wings subdentate, broad, triangular; grayish brown, reniform 9 shaped, inner annulus blue below, lines dark brown, a large violet and olive 3 mark near the anal angle. Expanse 5.75 - - - - - *E. Odora*, L.

90. ZALE.

Eyes naked, thorax and abdomen tufted, palpi erect, wings dentate, triangular, a little rounded; both wings brownish black, lines black, terminal space pale carneous gray, the boundary to the gray undulate on the fore wings. Expanse 1.50 - - -
Z. Horrida, Hub.

91. PHEOCYMA.

Differs from Homoptera in the palpi, being stouter and only one tuft on the abdomen and that is small; color gray, transverse lines, brownish black, both wings crossed by a number of fine brownish black lines, reniform lunate, brownish, annulate with black, with a more or less distinct ante-apical spot of brownish. Expanse 1.50 - - - - - - *P. Lunifera*, Hub.

92. HOMOPTERA.

Eyes naked, thorax and abdomen tufted, the latter with several small tufts, palpi erect, surpassing the front by the length of the head, wings dentate, a little rounded, broad triangular.

a. Color dark brown, shaded obliquely with paler.

b. Two white terminal lunules to each fore wing and one to each hind wing. Expanse 2.00 *H. Edusa*, Drury.

bb. Short white lines more or less distinct in place of the lunules - - - var *Saundersu*, Beth.

bbb. No white in terminal space - - var *Lunata*, Drury.

aa. Black species. Expanse 1.70 - - *H. Nigricans.*

aaa. Pale grayish brown, subterminal line black brown, more or less prominent, with white lunules or short lines in terminal space. Expanse 1.50 to 1.60 - - *H. Galbanata*, Morr.

93. YPSIA.

Eyes naked, thorax and abdomen tufted, the latter small, wings dentate, outer end rounded, triangular; black tinted with gray, subterminal line black, suffusion of olive scales in the region of the t. a. and t. p. lines and the terminal space. Expanse 1.65 - - *Y. Undularis*, var, *Æruginosa*, Guen.

94. HOMOPYRALIS.

Eyes naked, palpi ascending, surpassing the front by the length of the head, wings subdendate; both wings umber brown with a slight yellowish tint, transverse shade blackish brown, prominent, continued across the hind wings, t. p. line a series of drab dots. Expanse .95 - - - - - - - - *H. Tactus*, G.

95. PSEUDOGLOSSA.

Eyes naked, palpi erect, surpassing the front by twice the length of the head, wings entire, moderately broad, ends rounded; black with a yellowish tint, three transverse, wavy, yellow lines. Expanse 1.00 to 1.10 - - - - *P. Lubricalis*, Gey.

96. EPIZEUXIS.

Eyes naked, palpi erect, wings entire, ends rounded, moderately broad; yellowish gray or brownish gray, fore wings crossed by four wavy lines, the hind wings by three less wavy.

a. Yellowish gray, lines not heavily shaded. Expanse .95 - *E. Aemula*, Hub.

aa. Gray, brownish from the middle out, lines heavily shaded on the costa. Expanse .95 - - *E. Americalis*, Guen.

97. CHYTOLITA.

Eyes naked, palpi erect, surpassing the front by twice the length of the head, wings entire, ends rounded; pale ochraceous, two brownish lines crossing both wings, a subterminal row of brownish dots, stigmata indistinct. Expanse 1.30 - - *C. Morbidalis*, Guen.

98. ZANCLOGNATHA.

Eyes naked, palpi erect, surpassing the front by twice the length of the head, wings entire, ends rounded; ochraceous, transverse lines, reniform and subapical dot dark brown, subterminal line pale. Expanse 1.30 - - - - - - - - *Z. Lævigata*, Gr.

99. PHILOMETRA.

Eyes naked, palpi erect, long, wings entire; brownish ochre, transverse lines brown, not prominent, rather distinct transverse shade and subterminal line brown the latter shaded inward. Expanse .75 - - - - - - - - *P. Serraticornis*, Gr.

100. PHALENOPHANA.

Eyes naked, palpi erect, surpassing the front by twice the length of the head, wings entire; pale ochraceous, two transverse brown bands, straight internally, shading out to the ground color externally, the outer traversed by the pale subterminal line, two wavy brown lines between these bands. Expanse .95 - - *P. Rurigena*, Gr.

101. BLEPTINA.

Eyes naked, palpi erect, surpassing the front by twice the length of the head, wings entire; color drab, transverse lines faint, transverse shade prominent, brown, containing the narrow dark brown reniform, subterminal line pale, a terminal row of black brown dots, hind wings similar. Expanse 1.00 - - - *B. Caradrinalis*, Guen.

102. HYPENA.

Eyes naked,Palpi surpassing the front by twice the length of the head, more or less compressed, wings entire, rather narrow.

a. Color brown, slight violaceous tint, median space clear brown, rather dark, terminal space ochraceous. Expanse 1.20 - - - - - *H Achatinalis*, Zell.

aa. Color ochraceous, grayish brown along the costa to the reniform and terminally, stigmata remote, small, connected by a brown shade, lines indistinct, hind wings smoky. Expanse 1.25 - - *H. Evanidalis*, Rob.

aaa. Dark brownish gray, lines variable, t. p. line quite distinct near the hind margin, beyond which it is a little lighter, subterminal line a series of dots. Expanse 1.25 - - - - - - *H. Scabra*, Fabr.

4a. Differs from the above by being carneous gray along the hind margin and in subterminal space to apex - - var *Subrufalis*, Gr.

103. EULINTNERIA.

Eyes naked, palpi erect, surpassing the front by twice the length of the head, outer margin of fore wing of female entire, almost angled, of the male, bifid almost to the t. p. line; brownish purple, ochraceous at the base, basal, t. a., t. p. and subterminal lines and transverse shade brown, reniform ochre. Expanse .90 to 1.00 *E. Bifidalis*, Gr.

NINTH AND TENTH

Annual Reports

—OF THE—

Principal and Faculty

—OF THE—

SOUTHERN ILLINOIS NORMAL UNIVERSITY

For the Years

1882-83 AND 1883-84.

FREE PRESS PRINT.
CARBONDALE.
1884.

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NINTH

ANNUAL REPORT

—OF THE—

PRINCIPAL

—OF THE—

Southern Illinois Normal University

At Carbondale, Ill.,

MADE TO THE

BOARD OF TRUSTEES,

JUNE 13, 1883.

FREE PRESS PRINT,
CARBONDALE, ILL.

C 2129

Explanatory.

The following Report was made to the Trustees, at their annual meeting, June 13, 1883, and with the accompanying reports of the several members of the Faculty was to have been printed last year. Owing to a desire to print with it some scientific matter, to be accumulated by Professor French, relating to insects and insect-life in Southern Illinois, it was delayed till the last of November, 1883. At that time occurred the fire by which our building was destroyed. Owing to so many demands for additional expense in consequence of that fire, the publication was then postponed until the beginning of the present fiscal year, and the Trustees ordered it to be printed in connection with the Tenth Annual Report which follows it.

Southern Illinois Normal University.

CARBONDALE, ILL, June 13, 1883.

To the Board of Trustees of Southern Illinois Normal University:

GENTLEMEN:—Again it becomes a duty, and it is a pleasure, to make to you my Annual Report as Principal of this Institution. It has been a year of much labor, and of increasing prosperity. The number of students has increased to 544, and the confidence of the people in its stability seems also to have grown. The graduates are ten, and they will compare favorably with any previous class, either in ability or in scholarship. They have all passed what was adopted last year as the Graduating Examination. This is a careful review of all the studies their course made at some time during their last term in the University. It has been described in our Catalogue, and yet it is not inappropriate to call attention to it here, as the Faculty of the school deem it a valuable feature, and one which will give our graduates not only a reputation for scholarship, but will enable them to be much more certain of their own attainments.

The member of the Faculty, having in his charge each particular branch of study, prepares at an early day in the winter a set of thirty questions on that topic. These queries are to cover the subject fairly, embracing its difficulties as well as its elements. Yet they are not expected to deal with puzzles or curious questions. These thirty topics, for so they may very justly be called, are then submitted to the Principal, and he is to strike out ten of them and add, if he judges best, or modify as shall suit himself. The twenty thus left are then submitted to the State Superintend-

ent of Instruction, at Springfield, who examines them and strikes out ten others, leaving ten for the final examination. These ten are printed and at the proper time are laid before the candidate for graduation, and he is to write brief answers to such five of them as he himself may select. It is expected that he will give answers to fill, for each of his five topics, about a half page of foolscap paper.

These papers are then laid before a committee chosen by the Faculty, to be composed of not less than five, three of whom are to be County Superintendents, and the others are to be graduates of the University. These persons are to examine the written papers of the candidates and give their opinion of their merits and recommend them to the Faculty as qualified to pass or otherwise. This is the scheme.

It was carried out in full and with remarkable success, as we think. During the month of May the class did the work, almost wholly under the eye of some one of their professors, and we believe with honesty and fairness. The committee were Samuel B. Hood, Superintendent of Schools of Randolph county; William L. Martin, Superintendent of Schools of Washington county; William Y. Smith, Superintendent of Schools of Johnson county; Mary Wright, of Cobden, a graduate of the class of 1876; Lizzie M. Sheppard, of Carbondale, a graduate of the class of 1880, and John T. McAnally, M. D., of Carbondale, a graduate of the class of 1878. They met at the University the last of May and spent three days in a careful examination of the papers written, amounting to a little over a thousand pages of manuscript. They unanimously recommended the ten to be graduates, and passed a high encomium on the neatness and order of the papers. The members of the Faculty had previously examined and graded these papers, and when a comparison was made of the grades of this committee and those of the Faculty, the difference was found in each case to be not more than five in the hundred, in most cases the committee and the Faculty agreeing to within one and a half with the teachers.

These papers, after this careful examination, have been laid up in the Library of the University. They will be bound and will serve a valuable purpose for future reference and comparison. We deem this new feature a very valuable one, which in our opinion

will be fully equal to the highly useful examination for a State Certificate. It will send our students forth with a very complete review of their studies and with an ability to state in writing, in a brief manner, the knowledge they have been acquiring. We have been greatly pleased with the results of this first attempt, and shall seek to have it continued and perhaps to enlarge and render it more perfect.

The year, as was said, has been a prosperous one. The health of the pupils and of the members of the Faculty has been almost perfect, and the amount of study accomplished has been certainly greater than in any previous year.

There is a continued increase in the average age of our pupils this year. Including our Training Department, the average has been a little over eighteen and a half years, against about eighteen and a quarter years previously. The standard of qualifications has also advanced in a more rapid rate than that of age. We are certain that much of this elevation of attainment by the students who enter our University is due to the students who have been partially educated by us and have gone to teach in the schools of this section of the State. Most of those who enter our school now have been under the instruction of teachers whom we haye educated to some extent in our classes, and they come to us knowing, in at least a small degree, our methods. They spell much better than the candidates for admission did at first. In our first examinations it was by no means uncommon for us to give out fifty words—usually common ones—and find from sixty to seventy-five per cent. of them misspelled. In one case the percentage of failures went as high as eighty-three per cent. on such words as "specimen," "separate," "conceive," "believe," "grammar," "hammer," "primer," and the like. But this year the highest number of errors in similar case has been forty-seven. This is not very creditable for the orthographical teaching in our common public schools, but it is great progress. And letters received by us from our students who are engaged in teaching, and from directors and parents and friends of education, warrant the conclusion that much of this progress has been stimulated by our example, and by the persistency with which we have in our teaching enforced the idea that, of all things, the most useful and the most

necessary is the accurate knowing of the first elements of education—the English language, and its words—how spelled, how pronounced, with what meaning and with what force and beauty.

We find also a great advance in pleasing and appropriate reading, but not so much in arithmetic and in the grammatical accuracy of common speech. This latter is so much a family habit that it will, of course, require a longer time to show a decided improvement.

As to the old question, "do our scholars teach after they leave us?" we have an accumulation of facts beyond any pevious year, all weighing in the affirmative. It is to be regretted that a large proportion of our students do not remain to graduate, and enter upon the profession of teaching. Only about one in thirty of all our pupils have graduated. But if we count out all who hope to graduate, and all who have entered within two years, we find that about one in twenty who enter do complete the course. Considering the fact that we have a Training Department which receives children as young as eight years of age—though the number of such is small—not more than five—and that we have also a Preparatory Department, which corresponds to an Academy in the College system of education, our proportion of graduates to the number who enter will compare—allowing for the newness of our section of country—very favorably with those who in New England or New York set out to complete a College education and begin in an Academy. The College itself will hardly graduate the half of those who enter a four years' course. But these College students had entered an Academy years before, along with about five times their number, who had dropped out by the way before reaching the doors of the College.

But the beneficial results of the education or discipline which we are giving to the public are not to be measured by our graduates. It is chiefly by the effect on the many who are with us one and two years, and even less than a year, that we are, at this time of our history, to be valued. By the amount and quality of the teaching work done by our students who have been here only a few months and have learned something of the elements of knowledge which we teach, and become inspired by the methods which we use, and then have returned to be examples of more intelligent

citizens or to be better forces in the work of teaching common schools, is our influence to be estimated, and by this the value of our University is to be judged.

We have sent out as teachers not far from thirteen hundred—a little more than that number—and these have taught in a large number of the districts of this part of the State. We have direct testimony from directors, from citizens, from County Superintendents, from parents, and from these students themselves, all going to show that the public have appreciated our work, and understand that those pupils whom we have instructed—though only for a term of twelve weeks—have in most cases been better teachers than the districts had before employed. They have elevated the schools and made knowledge more attractive and scholarship more accurate. And they have, as was said a little space above, sent to us new students much better trained, far better qualified to study and more ambitious to learn. In this line we can not avoid the conclusion that we have been eminently successful in doing the work which the State needs and which the General Assembly expects of this University.

Our school is really not expected to train or educate teachers for the High Schools. It is to prepare those who shall do most of the teaching in the common and ungraded schools of the country. Teachers of High Schools and those who become Superintendents of schools and County Superintendents are more like the men of a learned profession, and generally have given time to prepare for their duties, and expect and recieve proportionately large salaries. But the teachers in the ungraded schools have had little opportunity for preparation; they receive small compensation and remain in the same place only a short time—perhaps not more than a single session of five months. It is for such as these that our pupils are instructed by us, and this is by far the greatest benefit to the State. Such districts as have small schools, and therefore can afford to pay only the most meagre wages, have children as full of talent, and even genius, as the largest and richest districts, and being, as they are, a part of the great system of the State, deserve as good schools and as efficient teachers as any section. They pay in the same proportion their taxes and should enjoy the school privileges in proportion to the numbers they will

contribute to the future population of the commonwealth. Let them have teachers who have been trained by the State authorities in our Normal schools, and they become the equals in the privileges of school education of the other parts of the State.

The advantages of our training are many, and not the least among them are bringing together young people who will teach for one or two, or at most, three years, and instructing them according to a common method and in common duties. By such associations and instruction they get the best ideas and learn how to impart them. They become confident, not so much in themselves as in the system of schools, and learn to act, not as isolated and independent, unsupported and neglected personages, but as parts of the grandest army of workers in the cause of education the sun ever shone upon. They also get from our Training Class a knowledge of what to do, and how to begin, and how to proceed, to the end. They are therefore not wholly inexperienced in the work they are to do, and can begin without loss to the community, making even their first school an assured success.

The greatest number of letters commending our schools have come to us from the country districts, and from these we have been assured of such success by our teachers as to have been led often to remark that the value of the schools where our pupils have taught has been in many cases doubled.

Another source of value our University has opened to the people of this section. It has given them a good school for their children at home, and has saved to them the expenses of travel to other States or to distant districts of our own. It has become a matter of pride that Southern Illinois has had a magnificient building for a Normal University, and that the State has maintained in it an admirable instution of learning, where the children of the common people may, almost at their own doors, enjoy the privileges of the best education which the land can afford. And the common people have largely patronized it. Up to this date there have been enrolled upon our books one thousand nine hundred and fifty-five persons of all ages. One of these has been above fifty years of age, two others above thirty, three below seven, and twenty-one others below ten when they entered the school. Taking all together, the age of entering has averaged

almost exactly eighteen years and three months. All the professions and callings have been represented by the parents of these students, but the farmers and laboring men have been by far the largest proportion, and the children of these have made up a little over eighty per cent. of the whole number in attendance.

The work of teaching has been carried on with two purposes in the minds of the professors. First, to give the students a careful and thorough review of the common branches of an English education, and second, to show the most philosophical methods of imparting knowledge and discipline.

That an English education is the most valuable to our people is not denied by anyone. While there may be differences of opinion as to the value of the ancient languages and of the sciences, there can be no doubt that the ability to speak and write the language of our daily life and business is the most desired, certainly at the first. No society is possible in this country without it, and no business could be done without the aid of the mother tongue. It must therefore be first acquired. Fortunately the child learns this by almost an instinct, and before he knows anything of the task or pain of learning, his ear is trained to hear and his lips to speak that noble language which inherits the wisdom of all times. He does not, indeed, learn the language in either its completeness or in its accuracy. This latter is most unfortunate. The common speech of the people—the self-styled educated—no less than those who rather make a boast of lacking education—does not attain to any fair degree of critical accuracy. This is not peculiar to the English speaking peoples. From the earliest times purists of speech in all tongues have made jests at the expense of the careless. It is no worse to-day than in the times of Loreginus, this inaccurate habit of talking. We smile at the spelling of our people, and our school teachers and parents who have given attention to the subject are not infrequently mortified by noting the blunders in orthography, in pronunciation and in diction or in sentence making of those whom they thought they had trained to know all the correct forms and usages in the lines named. And it is humiliating to find that a scholar who has seen with his eyes and has made with his pen, lips and voice the exact form and sounds, letters of the word "specimen" should write it in his first letter to

his home, in any of a half dozen of inappropriate and ludicrous forms. But it is not worse than the educated son of James II., of England, who wrote to the Parliament that "he claimed the throne by right of inheritance from his honored father, Gems II."

We must not excuse this careless usage, but teach by iteration and example the correct and elegant use speech which makes our language to be an ornament of thought, and which fills it with poetic beauty. In every step of our teaching it is our aim to secure this care in the use of "English undefiled," and to make it a habit as well as a knowledge for the pupil. Of course, we can only hope to succeed perfectly in this endeavor when all the schools and families of the land have become familiar with such accuracy.

The same aim we set before ourseleves in all the branches of study. Writing is not to simply make letters with a pen. It includes the ability to compose sentences, paragraphs and even discourses, and while we give attention to the mechanical part of the process, we also attempt much of the work of expressing thought by means of words. And here, too, we are compelled to confess that our success is as certainly limited in its results as in the case of correct spelling and elegant speech. Nevertheless, our only way is to reiterate our advice to continue the practice and never grow to be discouraged at any amount of forgetfulness or blundering, or even, in a few cases, of seeming stupidity.

We employ the same process with Arithmetic, Grammar, Geography, History and Philosophy and Hygiene. We wish to secure a practical knowledge of these branches so that our students can make all the computations of business and explain the process, can write accurately forms of business and transact all the multiform operations connected therewith, as he may have occasion in practical life; that he may know where the granaries of the world are and also the markets and the lines of commerce and intercourse, and could travel intelligently, actualy or in imagination, over the world and profit by it; so that he will in his daily reading of newspapers be able to understand the place of each affair named, and the varied allusions to history, ancient and modern; and, finally, that he shall know something of the laws of the body and mind and be prepared to apply the rules of health to his own body, to his diet, exercise, work and amusements. In

short, that the pupil may know how to live as a healthful man, a good citizen and a progressive philosopher as well as a scholar.

When the foundation for scholarship is thus laid in knowledge and in discipline or self-control, our next object is to show how the teacher can, with least loss of his own time and effort, and with greatest care to the scholar, impart all this. There are lines of advance into every topic of human knowledge which are more natural than others, and through which an entrance can be made with greater success than by others. There are connections and associations of knowledge, facts and principles which will better secure the memory of them than with other associations. There are exercises, the repetition of which will more certainly provide strength and agility of body and mind than others. The science of Pedagogy teaches and illustrates these. It is our purpose to lay these principles before our scholars and to exercise them in the art of teaching. This is our second attempt, and if our pupils could come to us, as we trust by and by they will, fully grounded in all the elementary knowledge and discipline of which we have spoken, this would be almost our sole aim, and the value of it to the community we think is far beyond its cost.

I have in previous reports spoken of the appreciation which the intelligent portion of directors and patrons of schools have shown of our work, and, indeed, have said a word concerning it in this report. It needs no further mention. We are assured by almost every mail that Southern Illinois does appreciate the State's liberality to its children and does value the facilities for educating them near their homes and in their own peculiar needs.

A few words may be said about the appliances we have for doing this work so much to be desired and so highly beneficial. And first, our building is really one of the best ever erected. Its noble hall for study, and its ample corridors for ventilation and ease of movement, its excellent opportunity for light and heat can have no competitor. We have all needed apparatus and appliances for illustration, not so complete as we hope to have as time advances, but in themselves excellent. We seek to add to these as the State gives us the means and as they wear out, and every year increases our facilities of showing experiments and exhibiting processes of teaching and doing the business of life. Every study pursued has more

or less of connection with some practical end that may be enforced or explained by physical apparatus of some sort, and we have this at hand and daily use it.

Then in Natural Philosophy we have machines and opportunities to illustrate—valuable indeed, not everything which is desired or needed—but enough to do better work than has been usual in seminaries of the kind, and it is our purpose to obtain more as it is made possible by our annual appropriations.

Our Chemical Laboratory is already the best appointed in any Normal school in the land, and is not only useful as a part of a Training and Experimental school, but as a place for research. And our pupils are specially instructed in the use of all the apparatus for analysis and composition, and in the process of discovery and verification practiced in any of the higher schools of the land. Yearly the classes in these important branches of physical research have been growing, and our means of doing original work are being developed and enlarged.

Besides, we have begun a Museum, which numbers thousands of specimens of minerals, plants, woods, shells, curiosities, archeological, historical and others, to illustrate the customs and manners, the science and modes of life of the human race. We are adding hundreds of specimens to it every month, and intend to make it not simply the best of its kind, but so nearly perfect that our students shall have opportunities to learn much of foreign lands without the trouble of travel and much of the history of the world as they would have seen it if they had lived in other times.

The Library consists of not far from eight thousand volumes, containing books on every topic of learning and research. It is valuable in works of literature and science, and is used by our professors daily to enlarge the scope of their instruction and to incite the ambition of the pupils to read and become habituated to gain knowledge as it has been preserved by scholars and scientists. Every year for the last seven the General Assembly has been fairly liberal with us in the matter of money to increase this library, and we have added to it not far from a thousand volumes a year. It is particularly rich in history, biography and in science, especially in books on the Theory and Art of Teaching, of Pedagogics and the kindred branches of the Mind and Morals.

We esteem it among our most useful means of instruction. Our students daily use it, and we think, profit by it.

We can not, indeed, understand how it is possible to carry on a school for the advantage of the public without connecting with it a library for two purposes: The one to give opportunity for the student to carry his reading in every science beyond the text book, and the other to enable him to form the acquaintance of those great masters of thought and language, who are found so abundant in numbers and so prominent in power, throughout the whole range of English literature. We have therefore accumulated a library of nearly eight thousand volumes, containing a large and very excellent selection of reading in both these lines named. While the General Assembly has never given us a large sum in any one year, or in all the time of our school's existence—not to exceed $4,500—we have made such judicious use of it that we are proud of its number of volumes and of their general adaptation to our design. An annual appropriation of about a thousand dollars will enable us to keep abreast, both of the science and literature, of the age.

We have thus, by some considerable sacrifice of salaries of professors, accumulated a fine Library, a large Museum and a good Laboratory for chemical experiment and research. The purpose of the latter is to study a very useful and growing branch of knowledge, according to the method of nature, not solely by books, but by actual work on the elemental atoms of matter, and thus compel nature to give up her secrets by the test of the crucible. The only way to make a scholar is to compel him to do the work. So we put our chemical student at the experiment table and give him the reagents and leave him, by the advice and direction of the teacher, to learn for himself. The same is our method of Natural History. He has the specimen before him as we have preserved it in our cabinets, and he studies that—not simply reads of it in a book. He may, indeed, read of coal in his text-book, but he must examine coal and find out by his own analysis what it is made of, and then we take him to the coal bank, let him find how it lies, how it is mined and what are the conditions under which it exists. He is therefore practically educated, and can not be a mere book-worm. In the same manner we study Mental Philosophy and the

science of teaching, or Pedagogy. He may read a text-book, bu he is to study his own mind and the mind and nature of the child his desires, emotions, affections, his ability to see and remember to imagine and to reason, and learn thus exactly how to presen knowledge that it may be grasped and retained, and recalled Then he observs in the school room, and learns to mark the metho of his teacher and the mistakes of his associates as they are calle on to teach classes in our Training Department. He is henc made a clear, knowing critic before he is called to exercise his call ing in an independent manner. We reckon this practice, in read ing books of the library, in studying specimens of our Museum, i working experiments in our Laboratory, and in actual teaching and observing in our elementary classes, the best part of the New Education. And we feel confident that by thus doing we are add ing to the value of the schools of this portion of the State in a sum almost incalculable.

One other thing deserves mention. The spirit of our schoo leads teachers and students to talk much of schools and teaching Intercourse with others with the same aims, and who are engaged fo a short time in the same pursuits, gives a love for the business and by discussing plans and difficulties, duties and expedients they all become in a greater or less degree prepared to enter on their work. If there were no other benefit of a school for teachers than this familiarity of the business of learning, it would give con fidence, and in most cases, would add power to the candidate fo the teacher's office.

Our teachers in each of the several departments have done faithful work and deserve credit for their zeal, and in many instances, sacrifices. It should not be forgotten that up to this time nearly every one of them is at work for a less salary than others in similar positions with a smaller number of hours than these in our school. They do not complain, but do this that our young institution may earlier accumulate the means of giving the best opportunities of reading, of investigation and of scientific research. They are having a reward in the larger number of stu dents who yearly come to be instructed and in the improved con dition of every facility we have for imparting knowledge and discipline.

The following persons are unanimously recommended by the Faculty to be graduated in the several courses of study prescribed by your rules. They have completed the required branches and have passed the usual examinations, and have been recommended by the committee of County Superintendents and Graduates, as heretofore stated in this Report, viz:

Franklin M. Alexander,	William B. Bain,
Maggie Bryden,	Alice M. Buckley,
Daniel B. Fager,	M. Lily Houts,
Belle Kimmel,	John Marten,
Della A. Nave,	Edgar L. Sprecher.

I remain very truly your obedient servant,

ROBERT ALLYN.

TENTH

ANNUAL REPORT

—OF THE—

PRINCIPAL

—OF THE—

Southern Illinois Normal University

At Carbondale, Ill.,

MADE TO THE

BOARD OF TRUSTEES,

JUNE 11, 1884.

FREE PRESS PRINT,
CARBONDALE, ILL.

Southern Illinois Normal University.

CARBONDALE, ILL,, June 11, 1884.

o the Trustees of Southern Illinois Normal University:

GENTLEMEN:—I have the honor to make a tenth report to our honorable body and to present with it the reports of the achers of the several departments and that of the Curator. The ircumstances surrounding us are sad. The ruins of our building e crumbling before us. Our narrow quarters are crowded almost o suffocation, yet they are far more commodious than we at first nagined it possible to secure. They have answered an admirble purpose. The school has been carried on with as much effiiency as ever, and this year we present to you for graduation the argest class we have had. It is a class of whom we are proud, nd is composed of nine young ladies and seven young gentlemen, ho are excelled in scholarship, in character and in worth by no lass which has gone forth from our halls. Nine classes have now een trained by us and sent forth to do good among mankind. 'en years have passed since the school was opened, and with the xception of the destruction of our building, our prosperity has een uninterrupted. The numbers in school have steadily grown, nd the character and attainments of the students have advanced.

It is therefore a favorable time to review our history, and to tate very briefly some of the results of our labors. The money lrawn from the State Treasury has been about two hundred thouand dollars; an annual average expenditure of twenty thousand lollars. The average number of students per year has been not ar from three hundred and fifty, rising during the year now clos-

ing to five hundred and forty. Of this number eighty-one ha
graduated. Among these persons there are now sixty-seven actual
engaged in the work of teaching. The benefits of the school
the community are not measured by its graduates or the work th
have done in the line of teaching. The influence it has had
the individual pupils who have been instructed, and the ideal
has held up before the public, as well as the information it h
scattered and the enthusiasm it has awakened among the peop
are really more valuable than the work of its graduates.

But as this is a Normal School, and as it proposes to educa
teachers, the real questions are, do the students teach schools aft
they are educated here, and do they teach better than they wou
have done? There can be no doubt on either of these points
one who carefully examines the whole matter. Both of the
points have been so often argued in previous years that I deem
inexpedient to do more than mention them at this time. The pa
winter we had information that over five hundred and ninety
our former pupils were teaching in fifty-eight counties of the Stat
and their wages, as reported, averaged something over forty-tw
dollars per month. The average of teachers' wages for the who
State is commonly set down as not exceeding thirty-six dollars.
fact like this indicates the value of the training our school giv
better than any argument could.

The number of students who have been connected with it du
ing these ten years has been 2,257. Some of these have remained
time not exceeding a month, and some have been in the school f
eight years, beginning in our Training School as primary studen
and going on to the highest classes. The value in money to
young person of a year's study is not easily estimated, but son
guesses have often been made, and good judges have put it as hig
as $500. Others, who wish to reckon it by the money which th
student must expend for tuition or instruction alone, reduce it
about $90. If we value it at a sum, which if put at interest woul
produce the extra wages an educated man or woman woul
receive above an uneducated one, we shall carry it above the $50
and probably above $1,000. The ordinary wages of a commo
unskilled and ignorant laborer who carries the hod or works o
a farm is certainly not above $400 a year, while the wages of

young woman qualified to teach a school often goes above that to at least $600, and that of a man fitted for the work of life as a teacher rises to at least $1,000. The difference is $600, the interest of a capital of $10,000. It would be fair to deduct from this sum the amount expended in obtaining this education, say $500 a year for six years, if you please, and it still leaves a large margin of money profit which a school like ours distributes to the community.

But we should remember that the child is to be supported, whether he gains an education or not, and that the education is value aside from and above its pecuniary worth. It would therefore be safe to say that each year's training given in a school like ours is worth to the State, aside from the board and support of the pupil, not less than $200. Our 2,257 students have averaged a time with us of about two years—a little more—which would give 4,514 years of instruction and discipline. This calculation carries the worth of our school to an amount which may well astonish ourselves. And yet who will dare to say it is an extravagant estimate? If we reckon all the money the State and the City of Carbondale have given to build and support the school in the fifteen years from the time of its establishment was agitated, in 1868, down to the present year, the total amount can not exceed a half million—but little more than the State receives in a single year from the Illinois Central Railway Company—while the benefits accruing to the children of this section can not be counted properly at less than a million. It may be argued that the State need not undertake this work, because private enterprise would give all this to the people. But it did not do it. This section was to a great extent without facilities for education before our school was established. Children were sent abroad for their schooling at large expense. Since this University was founded most of this work has been done at home by the State at a cost to the tax payers of less than the hundredth part of a cent levied annually on the value of each man's estate, and certainly one-half of those who have profited by the State's liberality would not have enjoyed the education they have now received.

A word more, however, as to the value of an education may not be inappropoiate in view of the controversy carried on, partly in the newspapers of this State, and

more largely and earnestly by the people themselves in their daily intercourse with each other, respecting the propriety of rebuilding our burned edifice, and this time I quote in substance the statements of the president of a college in the west. I do not give his words nor the name of the college, only the facts as he very briefly puts them before the public. "A class of twenty young men has just graduated. They have spent four years in college. The annual value of their wages before entering college was, according to careful inquiries made of them as individuals, less than $5,000, or $250 each. The salaries at which they are all engaged to work for the first year after their graduation aggregate over $15,000, or $750 each. Some get over $1,000 a year, and none less than $600." Here four years' study actually trebles the ability of twenty young men to earn wages for themselves. How does it affect their power to profit the community by labor? I might draw an illustration of a similar sort from almost any of our graduated classes, but for obvious reasons personally affecting the young people themselves I do not attempt it. This increased value of the work our students—indeed that of any student—accrues very greatly to the public. The simple hod carrier, who earns $1.00 or $1.50 a day, brings a certain profit to the community among whom and for whom he works. He is not a pauper and he adds to the value or wealth of the world above his own support. The building he helps to complete is worth considerable more to the world than its cost in materials and labor, and this simple laborer has given his proper proportion of it to mankind. So the young men and the young women, who by sacrifice and study fit themselves honestly to earn larger salaries have, in so far as they have paid their own expenses, actually conferred a benefaction on the public. If he keeps a better school and gets a better salary for it, he has blessed the world and is entitled to its gratitude. And if the State has in part paid his expenses of tuition, books, apparatus, etc., it has only invested its money in facilities by which it is to reap advantages.

Now, the actual part which the State, in case of a Normal School like ours, pays to assist the student to prepare himself to earn more wages for himself, and to do better and more valuable work for others, is comparatively small. The State gives

to each student in our school annually about fifty dollars' worth of instruction. Taking into account interest on the outlay for building, it will not exceed $75 a year. The student pays his own board, clothing, traveling expense, books, and gives his time, averaging as above stated, $250; or, at the smaller and probably juster estimate, for men, women—boys and girls, as students are—very nearly $175. Put all these together, and the student's personal contribution to the commercial wealth by making himself a better man or a better woman, a better citizen, as well as a better worker or teacher, is not less than from $300 to $500 a year, as against the State's highest figure, $75. He, himself, indeed, afterwards profits by reaping threefold wages.

But how much profit does the State gain by having a teacher who can work on the system which it has marked out in its law, and which it provides machinery to carry forward under its Superintendents, State, County, Municipal and District? The late President Garfield once said: "I had rather have a log cabin for a school house and a puncheon for a seat, with a live and educated man like Dr. Hopkins at one end of it for a teacher, than have a fine palace of a school house and have a dunce for an instructor." The policy of the State and of the cities and districts has too often been to build fine buildings for schools and then hire cheap teachers. A city in Wisconsin built a thirty thousand dollar house and hired a six hundred dollar principal and three hundred dollar teachers. The true policy is to get the teacher who is educated, enthusiastic, up to the times, full of the spirit of education. And the State had far better spend money to make or to inspire such men than in any other way. It is said of Lord Nelson that after the victory at Cape St. Vincent over the Spanish fleet, he went on board of the captured vessels to inspect them. On returning to his own vessel he said to his friend, a favorite officer: "Collingwood, what a pity the Spanish navy yards can not build men as they can ships! If their men were equal to their ships we might not be coming away from those vessels as we are, conquerors!"

Our State has a magnificent system of schools. It has invested in school buildings in the cities, villages and districts not less than twenty millions of money. It pays out annually about eight millions—more probably in all ways, not less than ten millions—

for the education of its children. For a population of almost four millions this is not a great burden. But it must and should not be wasted or ill managed. The whole of the profit of it depends primarily on the teachers employed annually in these schools. Put into the public schools good teachers, let them educate the children rightly, and the value of those children will be enhanced not merely three-fold, but a hundred-fold. As much as an intelligent man or woman is more useful and able than a stupid boor, so much is the worth of education given by one who can inspire as well as teach. Real teachers are wanted. How can the State obtain them? In one of three ways. By paying them such wages as they themselves may fix, as it does its lawyers and physicians—wages ample enough to cover all expenses of education and time—or by giving them the knowledge partly at the State's expense and then demanding that they in return teach a given length of time, or compel them to attain a certain grade of knowledge and it may fix the salaries by boards as now done, and then it will get teachers who, as the State Superintendent of Ohio says is the case in his State, will waste a full half of the money expended. The cheapest as well as the most effective plan is for the State to educate only in part, but to do this on the line of its own system of schools, making them somewhat uniform and always full of the public spirit of the popular education.

A few thousand dollars spent thus at a few schools on a few scholars will create a public opinion, and a demand for better teachers will set up a standard to which all must in a short time conform, and will advance the whole line of instruction throughout the Commonwealth. And here is one of the difficulties we encounter. Too many teachers of the old style find themselves thrown out of employment by the demand for young and better educated ones, and they cry out against Normal Schools. Too many directors find the standard of qualifications and wages rising upon them, and they cry out against new methods. The better teaching does call for better wages, and such men fail somehow to comprehend that these higher wages imply a more rapid and thorough communication of knowledge, and, of course, a far greater value given to their children as laborers and especially as citizens. But these are points which really do not need to be argued. They do, however, need a

constant repetition. For they are, in the rush of business and even in the temptation to superficial thinking, in danger of being overlooked, and the time given to considering them can not be said to be thrown away.

The great question, however, which absorbs all our minds and, indeed, should properly be before all others, is that of rebuilding our burned edifice. Shall the ruins stand in their desolation a monument of education neglected and despised, a monument of the lack of enterprise of the people and of discouraged endeavor to elevate our school teachers? Or shall that once noble building arise from its ashes in better condition, in finer proportions, and to a career of greater influence? Shall the people of Southern Illinois, lately enjoying equal advantages with the other parts of the State, be deprived of what they have greatly profited by, or shall their facilities for educating their children and their teachers be restored, if not enlarged? Let it be remembered we have paid our full share to build up all the other educational and charitable institutions of the State; that distance or proximity is a great element in estimating the advantages derived from these institutions, and that the State itself, by refusing to appropriate money to enable us to insure our noble building, has really deprived us of the power to restore it. We have been equal tax payers for the privileges which all may enjoy. The State had distributed its facilities for enjoying its own bounties, and by a most untoward accident this part of the Commonwealth is left destitute.

We feel mortified to think of the disaster of the fire, uncontrollable as it was. Certainly we had supposed the appliances for extinguishing a fire were ample. We had water tanks—arranged when the building was erected—hose had since been provided, and ample faucets for jets of water; a steam engine was ready. But most unfortunately, the tanks had been originally placed too low beneath the roof, and the fire caught above them. Consequently, no jet of water could reach it. It was also found that when the steam engine could be got to work, there were no stop-cocks to shut off the water from the tanks and thus force it through the hose independently of these tanks. Water buckets, then, were our only reliance. But the fire, being under the roof, had immediately on its breaking out filled the whole of the immense space over the

rooms of the Mansard story with smoke so dense that no one could live there, or reach the only trap door out to the roof itself. There was then absolutely no chance whatever to fight the fire from any quarter.

At the time of the discovery of the fire the school was in session, and as soon as every attempt to control the fire had been thought of and tried only to fail, the professors, the students and citizens gave themselves up with an intelligent system and an energy to the work of saving what property could be removed, and in an hour and a half the larger part of the movable furniture, apparatus, and library was safely carried from the burning building. This was done in most instances so carefully that even very small and delicate articles were as well preserved as if they had been packed by a salesman for distant transportation. The order and zeal, the force and wisdom with which our students, both the ladies and the gentlemen, worked, in many cases almost independent of suggestion, and commonly without supervision, can not be too highly praised. Indeed, their quiet and ready apprehension of the dangerous situation and the necessities of cautious haste under the appalling circumstances of the hour, commended them to the confidence of their teachers, as nothing else could have done, and showed the value of the training they had received. And when we, on that evening, made our very simple arrangements to carry on the school in rooms hired in the city, or so promptly and generously donated for the time by the citizens of Carbondale, the orderly and cheerful manner in which they continued in the line of duty was so admirable that it should endear them to the public, and it certainly goes far to prove that the work of the institution has been to the State an invaluable boon. A trained fire company or a salvage corps in a city, where such calamities are a weekly occurrence, could scarcely have gone about their duty with more intelligence and efficiency, and certainly not with more persistence and celerity.

While the building was burning telegrams had been sent to various places, and the fire companies of Cairo and Murphysboro came to assist; but they were too late to accomplish anything more than show their earnestness and sympathy.

And the citizens of Carbondale showed a spirit of sacrifice and

helpfulness which can, with difficulty, be comprehended by persons at a distance. Before I had had time to reach my house messages and letters had preceded me making offers of rooms gratuitously for use so long as they might be needed. Particularly, one came from Col. D. H. Brush which, in its heartiness and fullness of sympathy and kindness, was most gratifying and encouraging. Others made similar offers of assistance, which were carried out in a manner even more generous than they at first seemed

The citizens had consulted with me on the grounds beside the smoking ruins of our University, especially the Mayor of the city, Capt. E. J. Ingersoll, with his City Marshal, who, let it be said here, was efficient in selecting watchmen for the scattered property; and it had been then agreed to hold a mass meeting that evening at the Moody Opera House, to take into consideration what could be done in the emergency. The meeting came together, composed of citizens and students, and a few persons from the neighboring towns. But, comparatively little was said. Several telegrams to the Principal, to the Mayor, and to the Editor of the Free Press had been received and were read. And it was there resolved to build a temporary structure, sufficient to furnish accommodations for the school until the session of the General Assembly, when the building will undoubtedly be rebuilt in even better style than at first. A plan was hastily, though happily, suggested by Mr. Isaac Rapp and Mr. Charles E. Brush, and subscriptions were at once commenced for the work, and in less than two months of the most inclement weather, in a remarkably inclement winter, we were very creditably and comfortably housed, and pursuing the ordinary course of our school work. During the intervening days the recitations went on in rooms, the occupants of which removed from them, and in many cases made no charges for rent. It was an exhibition of patriotic duty to the State, as well as of interest in the students personally, and of benevolence to the public, which speaks for the credit of the citizens of the city of Carbondale.

The new buildings, our temporary quarters, were occupied on the last day of January, and had cost the individuals who combined to put them up $5,700. Some of the rooms were not completely furnished, and, indeed, the weather would not admit of plastering the building, and it has been occupied since we entered

it in a rude condition. But it has answered an admirable purpose. It should be plastered during the vacation, and in this way should be made so that the sound of recitation in one room shall not be so distinctly heard in the one next to it. Some more shelving should also be put in for our books and apparatus, and for the articles for the Museum, which are again very rapidly accumulating on our hands.

Of the work in the several departments I need say little. The professors have conducted their recitations, drills, examinations and exercises under many difficulties, of course, but always, I believe, with as much success as in any previous year, and with, if possible, greater earnestness and devotion. They have shown, not less than the students, how a determination to perform duty can be carried forward under what might, at first, seem crushing adversity. And the development of character in both pupils and teachers, under the circumstances has, I am sure, been as great as it could have been, if no disaster had overtaken us. Self reliance and fertility of invention have been fostered, and by the discipline and energy thus induced the State certainly will profit.

It may be stated concerning the plan of the temporary structure, that it is in the form of a Greek Cross, having a large room at the intersection of the arms, in which the students assemble for general exercises and for study. This gives us sixteen rooms, all on the ground floor, and very conveniently located. They are, every one, too small, but they accommodate us after a fashion, and shelter us nicely. We can remain in them for a couple of years, probably, by crowding ourselves very compactly, till the General Assembly shall, in its wisdom, and with its sense of justice and its true regard for the interests of the whole Commonwealth, vote the money to rebuild what was a pride to the State and a blessing to this section.

The several reports of the teachers accompany this, and are commended to your attention as showing a very eminent degree of attention to their work, and proving that each one has a large amount of duty for each term. The destruction of our building has added materially to the care and labors of each one, and not one, it is believed, has neglected a duty or failed in diligence at any time since our disaster. Every one gave largely to aid the

itizens in their generous attempt to furnish our quarters. The tudents deserve commendation for their zeal and liberality, they aving at a considerable sacrifice put into the hands of the build- ng committee a very generous sum. And it should not be omit- ed that many of our former students sent cash and earnest sympa- hies. One donation particularly grateful, as it came unsolicited nd from a quarter which has always shown us special sympathy. t was from the Illinois State Normal University, at Normal, and xceeded $130. The promptness and cordiality of it gave to it nore than a double value, and we trust that it marks the general entiment of the educated teachers and the progressive young peo- le and students of the State as to the necessity of continuing the chool in operation, and in favor of rebuilding it at the earliest noment. I am sure the Board of Trustees appreciate all these vidences of kindness as truly suggestive of public opinion, and ill do all in their power, as I know the teachers all desire to, hat the school may be made better every succeeding year.

Indeed, gentlemen, your liberality and generous appreciation f our services has often touched our hearts, and the fact that ou have in this most trying emergency maintained confidence n the management of the school, has been grateful beyond xpression. The Principal wishes here to acknowledge your indness, and as the event has shown, your wisdom, in, almost ontrary to his desire, relieving him from the recitation room at he last Commencement. It was then found that the school had rown to such proportions in numbers of students that the work f supervising would occupy all his time and exhaust his energies. nd the calamity, coming as it did, certainly demonstrated the ropriety of leaving him free to do more of the general supervising. Vith the more special work of Prof. Hull in the Training Depart- ient, much more has been done to give our students valuable ractice in the recitation room, and they have certainly profited y it to a very large degree. This department has never been so fficient as during the present year under the care of Miss Sowers nd Prof. Hull, and she leaves her work to Miss Alice Krysher, nother one of our graduates, in the best condition for even greater uccess. From the beginning of the University it has been an bject of desire to make a Training Department an important

part of our business, and at first it did seem that we had arrange
ments made to secure it. The distance of our building from th
city and the unwillingness of parents to send the small scholars s
far appeared to be such potent factors in the problem as to rende
our success doubtful. The number of primary pupils sent to us t
be taught in the Training Department dwindled to so small a num
ber that the school was discontinued. But in the last two years ther
seemed to be a growing demand for the renewal of the experimen
It was at once determined that if forty pupils could be obtained
Training Department should be opened and put on a more secur
and satisfactory basis. The number was reached at once, an
more stood waiting to come in whenever a vacancy occurred.

Miss Sowers, a graduate of the University, as stated above, wa
employed, and the work has been a success from its reopening. I
has done an excellent work for the small pupils themselve
They have learned in a much better manner than is common wit
children of their ages to read, and especially to state in words
their own choosing what they know or have read. Indeed, I hav
never met with children of their age who have so good a comman
of proper English, or who have acquired so large a fund of gener
information. The University during the first year used a part
its library fund to purchase about two hundred volumes of chi
dren's histories and story books—juvenile works on Natural Hi
tory and books of travel and description. The pupils have use
these very industriously, and they have profited by them to suc
an extent that they can tell in an intelligent manner many of th
great events of history. They may not have learned so much co
cerning arithmetic and grammatical parsing as some of their ag
but they do know far more of the world in which they live, an
the different plants and animals on its surface, than is common f
children of sixteen and eighteen. And what is more to our pu
pose, they can tell it; and they have been acquiring a relish f
good books and a real love for the knowledge which they promu
gate.

One of the grandest results to be expected of our publ
schools is that it shall so lay an emphasis on good reading
found in permanent books—not wholly in the periodical literatu
of the day—newspapers and magazines, necessary and instructi

as these are made by our civilization. And the benefit to these smaller pupils has in this direction been immense. We have tried to make it so that every parent who should send his child to this department of our school should, on the whole, gain by it. And we think that Professor Hull and Miss Sowers have, without possibility of dispute, proven that such patrons and their children have been gainers by their choice of paying our little fee in addition to what the tax rate compels them to pay to the public school.

But our Training Department has altogether another object as its primary motive. It is to be, in addition to what is above claimed for it, a place in which our Normal student, who intends to graduate and afterwards teach school, shall be inducted into the experience of teaching. He is to be a Pupil Teacher in this Training Department of ours. We expect him to spend at least one hour a day for a year in this work. First, he is required to be present at some of the recitations and exercises of this department and make observations of the method of teaching, of governing, of controlling, of securing order and attention; to note the tact of the teacher in avoiding difficulties and overcoming obstacles, and of conveying lessons of value, of giving knowledge not in the text-book, and finally to mark all the order and movement and enthusiasm or spirit of the school. He is next required to teach a class under the eye of the superintendent or the assistant, and to recive criticisms and suggestions. And, lastly, he is to try for himself, by his own tact, to control, to govern, to stimulate and to interest the class, and make his report thereof. He must therefore watch processes and apply principles, and by this practice fit himself to act independently. Thus he he goes forth to his work of teaching, not a novice uninstructed and inexperienced, but with such a trial of skill and such an amount of furnishing as give him a large degree of the practical ability of a trained and disciplined teacher. It has been one of the best features of work for the past two years, and we hope to improve it in the future.

The year has been marked by the inauguration of a department of the German and French languages, under the care of a native German of large experience as a teacher and of competent knowledge of both of the languages, and of the philosophy of Pedagogics—Professor John Bengel, late of the Michigan State Normal

School. The number of pupils has been respectable and th department promises much usefulness to our section of the Stat where the German is so much desired as a means of communica ing with our cousins who come in such numbers to settle amon us, and who themselves need the assistance of a countryman t assist them to acquire our language and to make themselve familiar with our customs and laws and our modes of speech.

In conclusion, allow me to say that we still have the highes hopes from our school. The Faculty are determined that no study no sacrifice nor watchfulness on their part shall be wanting to mak the University a power in the State and an honor to the great cause o universal education which it has been established to represent an to foster. I am certain the students who have been in attendanc and in especial manner those of them who have graduated, ar inspired with the same great purpose.

The Faculty have carefully examined the following youn ladies and young gentlemen, who have completed the course o study prescribed by your rules, and finding them well qualifie and knowing them to be of unblemished morals, recommend the to you to receive the Diplomas of the University, viz:

IN THE CLASSICAL COURSE.

Alacia E. Beesley,
George V. Buchanan,
Joseph B. Gill.

IN THE ENGLISH COURSE.

Fannie A. Aikman,
May T. Buchanan,
Clara Buchanan,
Christopher C. Cawthon,
May B. Duff,
Lu Bird Hendee,
Philetus E. Hileman,
John H. Jenkins,
Richard T. Lightfoot,
Maud Thomas,
Carrie L. Ridenhower,
Charles W. Treat.

I remain, gentlemen, very respectfully,

Your most obedient servant,

ROBERT ALLYN.

DEPARTMENT OF LATIN AND GREEK AND REGISTRAR.

ROBERT ALLYN, LL.D.,
Principal Southern Illinois Normal University:

DEAR SIR:—I have the pleasure of presenting herewith the following statement of the classes and work in this department for the scholastic year 1883-84:

In the Fall Term the classes under my charge were as follows: viz:

1. Greek Rudiments, 9 members.
2. Latin Elements, Section A, 19 members.
3. Anabasis and Greek Grammar, 6 members.
4. Cæsar's Commentaries and Latin Grammar, 15 members.
5. Virgil's Æneid, 9 members.
6. Latin Elements, Section B, 18 members.

During the Winter Term my classes were the following, viz:

1. Greek Grammar and Reading.
2. Latin Reader and Grammar, Section A.
3. Memorabilia of Socrates and Greek Grammar.
4. Cæsar and Sallust and Latin Grammar.
5. Orations of Cicero.
6. Latin Reader and Grammar, Section B.

During the Third Term, and at this writing, the classes under my charge are pursuing the following studies, viz:

1. Xenophon's Anabasis and Greek Grammar.

2. Latin Grammar and Reader, Section A.
3. Homer's Iliad.
4. Sallust's Catiline and Latin Grammar.
5. Tacitus de Germania.
6. Latin Reader and Grammar, Section B.

In addition to the work of instruction in the above classes, I had charge of the Teachers' Institute, which occurred during the last vacation, and continued four weeks.

It gives me pleasure to state that most of the students in my department have exhibited a commendable zeal and energy in their studies, and have made excellent progress. A few have been irregular and inattentive, and consequently will fail to carry their work.

Our classical course embraces three years of the Latin language and two of the Greek. Three members of the graduating class this year will honorably complete the full classical course; two will, alike, honorably finish the entire Latin course, and nine others will complete one and two years of the Latin.

Added to my duties of the school and recitation room, I have performed the labors of the Registrar of the Institution. These at times have been many and onerous. I have carefully enrolled in the aggregate the names of one thousand and sixty-nine students, giving date of entrance, parent's name, date of birth, nativity, county represented, etc.; have collected all tuition and incidental fees, and, on receipt, have transferred the same to the Treasurer of the University; have transcribed the minutes of the Board of Trustees into the Record Book; have placed on file all original bills; have prepared all vouchers in duplicate for current expenditure; have issued money orders on the Treasurer for the payment of all bills of indebtedness, and have kept a faithful account of all amounts received and paid out; have sent catalogues to all the County Superintendents of the State, to all the papers in Southern Illinois, and to all students of the current year who were not in attendance at the close of the year; and have performed such other duties as pertain to the office of the Registrar of the Institution.

Respectfully submitted,

CHARLES W. JEROME.

DEPARTMENT OF PEDAGOGICS AND HIGHER MATHEMATICS.

ROBERT ALLYN, LL.D.,

Principal Southern Illinois Normal University:

DEAR SIR:—I present the following as a report of my work in the Normal School for the year 1883-84:

At the beginning of the year the Faculty, acting under authority of the Trustees, assigned the classes in Algebra to other teachers in the school, and at the same time gave to me the Theoretical Pedagogics, including Mental Philosophy. These changes would have given me an additional hour each day for the supervision of pupil teachers in the Training School; but subsequent changes lessened, rather than increased, the time for such supervision by adding to the previous assignment one class each in Algebra, Logic, Ethics, and Civil Government. The following is a summary of my class teaching during the year, each class continuing for one term:

Training School—Arithmetic, two classes.

Normal School—Practical Pedagogics, two classes; School Law, one class; Mental Philosophy, one class; Theoretical Pedagogics, two classes; Logic, one class; Ethics, one class; Civil Government, one class; Algebra, one class; Geometry, two classes; and Trigonometry and Surveying, one class each.

All the classes under my care have done well. The members have earned special commendation for the spirit manifested by them during the weeks in the inconvenient quarters in the business part of the city, and for their cheerful persistence in following to the end any study undertaken. The trials of the year have been met in a way to call for high praise.

The work of the Training School has followed somewhat closely the plans of last year. The number of classes which it has been my lot to teach has been so large that I have not been able to give to this department of our school the time necessary to its most profitable working. I am glad to say that the plans for the coming year are such as to give me the heretofore much needed time.

The report of Miss Sowers, Assistant in the Training School, shows that the pupil teachers numbered nineteen in the Fall Term and eighteen in each of the other terms. Almost all of these have done good work.

The Normal pupils have learned to look on the Training School with greater favor than at first. In the second year, now closed, they have accepted the class teaching assigned them with greater readiness than before, and have shown greater desire to profit by the instruction given them. The second year of the Training School is clearly an improvement on the first, and there is good promise of continued improvement.

Respectfully submitted,

JOHN HULL.

DEPARTMENT of PHYSICS, CHEMISTRY, GEOLOGY & BOOK-KEEPING.

ROBERT ALLYN, LL. D.,

Principal Southern Illinois Normal University:

DEAR SIR:—The following is a summary of the class-work done in the above department during the school year 1883–84:

FIRST TERM.

	ENROLLED.	PASSED.
Natural Philosophy, B	36	32
Natural Philosophy, A	39	30
Chemistry, B, two sections	36	33
Spelling	44	

SECOND TERM.

	ENROLLED.	PASSED.
Book-Keeping, two sections	50	8
Natural Philosophy, B	29	21
Chemistry, A, two sections	33	33
Spelling	25	

THIRD TERM.

	ENROLLED.	PASSED.
Book-Keeping, two sections	34	18
Natural Philosophy, A	38	33
Geology	18	18
Astronomy	21	21

The department suffered much by the calamity that befell the Institution on the 26th of last November. While the larger part of the physical and chemical apparatus was saved from the fire, the facilities for using it were impaired. The classes in Geology and Mineralogy lost more from the fact that the specimens of rocks, fossils and minerals were kept in the Museum, which was

entirely destroyed. But notwithstanding the great loss the results of the different terms compare favorably with those of former years.

By commendable zeal and special effort on the part of the students, the work accomplished warrants me in stating that those who studied the several branches in the above department during the past year feel that they have realized as much profit as did their predecessors. And while the coming year can promise but little more in ample rooms and suitable facilities for work, there is every reason to hope for as gratifying results as attended the year just closed.

Thanking you for your courage and counsel in the hour of extreme trial, and encouraging sympathy in times of perplexity and need, I remain

Yours obediently,

D. B. PARKINSON.

ANALYTICAL TABLE.

Solutions Must be Aqueous or Slightly Acid.

I. Add *H Cl.*

(If no v pass to II.)

A v indicates Hg(ous), Pb or Ag.

Collect the v by filtering or pouring off the liquid. Add NH4 HO.

Hg, v blackened.

Pb, v still white.

Ag, v dissolved.*

II. Add *H2 S.*

(If no v pass to III.)

A v indicates Cd. Cu. Hg(ic). Pb. Bi. As. Sb. Sn. Au or Pt.

Collect as in I. add (NH4)2 S

If DISSOLVED.		If INSOLUBLE	
As.	Yellow.	Cd.	Yellow.
Sn(ic)		Cu.	Black.
Sb.	Orange.	Hg(ic).	
Sn(ous).	Black.	Pb.	
Au.		Bi.	
Pt.			

III. Add *(NH4)2S.*

After first adding NH4 Cl. and NH4 HO. (If no v pass to IV.)

A v indicates Zn. Mn. Co. Ni. Al. Fe. or Cr.

Zn. Al.	White.
Cr.	Green.
Mn.	Skin-tint.
Ni. Co. Fe.	Black.

IV. Ad.*(NH4)2CO3*

(If no v pass to V.)

A v indicates Ba. Sr. or Ca.

To original solution add Ca. SO4.

Ba. a v at once.

Sr. a v in 20 min.

Ca. no v formed.

V. Add *Na2PO4*

(If no v pass to VI.)

A v indicates Mg.

VI. No group

Reagent for K. Na and NH4.

K. Violet flame.

Na. Yellow flame.

NH4. No flame coloration.

NH4. Odor, and fumes color turmeric paper when solution is heated with Na. HO.

*Where the table indicates the presence of a metal, make special tests by Crafft's Qualitative Analysis.

The group reagents are in italics at the head of each column.

The letter v is substituted for character denoting precipitate.

DEPARTMENT OF ENGLISH LITERATURE, ELOCUTION, Etc.

ROBERT ALLYN, LL.D.,

Principal Southern Illinois Normal University:

SIR:—Herewith is transmitted a report of the enrollment and work in the Department of English Literature, Elocution and Reading, and Vocal Music, for the school year which closed June 11th, ult.

The following tables show the number of pupils enrolled in this department, and the number who have successfully completed the work of the various classes:

FIRST TERM.

	ENROLLED.	PASSED.
Rhetoric	23	21
Elocution	12	9
Reading, B, two sections	62	42
Vocal Music	22	13
Arithmetic	34	21

SECOND TERM.

	ENROLLED.	PASSED.
English Literature	19	17
Elocution	14	11
Reading, A	27	18
Reading, B	26	21

Vocal Music, class formed, but discontinued with the advice and consent of the Principal.

THIRD TERM

	ENROLLED.	PASSED.
English Literature	18	16
Elocution	19	18

Reading, A	21	17
Reading, B	24	18
Vocal Music	26	20

A few changes have been made in the work of this department; the most important being the addition of Rhetoric, which with the English Literature, makes a year's delightful work. During the Fall Term I assisted Prof. Inglis by taking charge of a class in Arithmetic.

The work of the year has been carried forward under great difficulties and embarrassments, caused by the burning of our building, but it is a pleasure to state that as rapid progress has been made, and as thorough work done, by the students, as have marked any previous year. The cheerfulness, fortitude and loyalty displayed by them during the weeks that elapsed after the fire and before the occupancy of our new building, were, in the highest degree, creditable and admirable.

For your counsel, encouragement, and sustaining sympathy amidst the trials of the year, accept my profoundest thanks.

All of which is respectfully submitted,

JAS. H. BROWNLEE,

Teacher Eng. Lit., Elocution, Reading and Vocal Music.

DEPARTMENT OF HISTORY.

ROBERT ALLYN, LL.D.,
Principal Southern Illinois Normal University:

DEAR SIR:—At the beginning of this school year the Department of History was assigned to me, and of the work in that department I have the honor to submit the following report:

FALL TERM.

U. S. History, C, three divisions	102
U. S. History, B	23
General History	20
Total	145

WINTER TERM.

History, C	41
History, B	79
History, A	36
Total	156

SPRING TERM

U. S. History, C	24
U. S. History, B	48
U. S. History, A	28
Total	100

I am glad to report that the students in this department have been in general diligent in their work, and have made very gratifying proficiency.

Respectfully submitted,
ESTHER C. FINLEY.

DEPARTMENT OF PENMANSHIP AND DRAWING.

ROBERT ALLYN, LL.D.,
Principal Southern Illinois Normal University:

DEAR SIR:—The work which has been done in the Department of Penmanship and Drawing for the school year of 1883–4, is as follows:

During the first term there were three classes in Drawing, numbering together seventy pupils, and in addition to this, one class of twenty-three from the Training Department. In Writing, the three classes were made up of one hundred and forty-five pupils making a total of two hundred and thirty-eight who received instruction in Penmanship or Drawing during the term.

For the second term the number of classes was the same, the pupils from the Training Department continuing to work with the fifth hour class through this session, and also through the Spring Term. The number of pupils for the second term was one hundred and eighty-eight. The work done at this time was quite as satisfactory as that during the first term, though on account of changed accommodations the amount done in Drawing was not quite so great. For the Spring Term the number of classes was four, and of pupils one hundred and sixty-one.

For the year, then, the students in this department numbered five hundred and eighty-seven; and of that number two hundred and ninety-three were pupils in Writing and two hundred and ninety-four in Drawing. The work in the first named study consisted of thorough practice in the forms of letters, and drill in the principles. In the second named the mediums used were pencil,

crayon and charcoal, and the kinds of Drawing—model, geometrical, free hand, dictation, and some drawing from casts and sketching from nature. The free hand drawing, of course, included work on the black-board.

The work of the first term included also a class in Spelling, containing thirty-four pupils. No help was received during the year from pupil teachers.

Respectfully submitted,

MARY ALICE RAYMOND.

DEPARTMENT OF NATURAL HISTORY AND PHYSIOLOGY.

ROBERT ALLYN, LL.D.,

Principal Southern Illinois Normal University:

DEAR SIR:—I have the honor to report the following as a summary of the work done in this department during the year 1883–84.

The general character and plan of the work have been much as they were in former years, save that in consequence of the resignation of Professor Granville F. Foster, at the close of last year, and the changes growing out of that, the study of Physiology has been added to the work in this department.

During the Special, or August session, classes were taught in Botany, Zoology and Physiology; the general course of former years being followed, in that no particular text books were used, but topics were given that might be studied from any books the pupils might have. Field work was done in Botany and Zoology, but to a more limited extent than some years, for several reasons. The season was very unfavorable for work in insects, as there were very few of any kind to be had. Some work was done, however, not only by excursions to the adjoining woods and fields, but attractive fields farther away were visited as well. At the close of the session opportunity was given for examinations for record in our books, and several took this means of making grades.

During the Fall Term classes in Elementary Zoology and Advanced Physiology were taught; the Advanced Botany I have had on former Fall Terms, being dropped.

The statistics of the two classses are as follows:

	NUMBER	LEFT CLASS	PASSED
Elementary Zoology.....	20	4	16
Advanced Physiology.....	35	7	26

The time not devoted to teaching these two classes was given to work in the Museum, which is reported on elsewhere.

Up to November 26th, the classes were taught and the work done in the old building, but after that my classes were heard in the office used by Mr. C. E. Brush; and the Museum work was done at my residence until our temporary building was ready for occupancy, which took us into the Winter Term.

During the Winter Term two classes were taught with the following results:

	NUMBER	LEFT CLASS	PASSED
Advanced Zoology	35	4	30
Elementary Physiology	24	1	23

These were composed of those who had regularly reached these studies, being thus prepared for the work, and the results were very satisfactory.

During the Spring Term just closing, I have had four classes that give the following results:

	NUMBER	LEFT CLASS	PASSED
Advanced Botany	57	4	51
Elementary Botany	34	4	29
Advanced Zoology	26	2	24
Advanced Physiology	51	11	37

In the Physiology it was deemed best to use a different book from the one used in either of the former classes, and Dunglison's was selected, its use giving satisfactory results.

The classes in Physiology and Zoology were what may be called special, or called classes, or classes for the accommodation of such as could not be in the regular classes some other terms, by reason of being absent from school, engaged in teaching, or for some other reasons.

My classes this term have been larger than ever before since it has been my fortune to be connected with the school, as a comparison of the above figures with those of former years will show. Some practical work in Botany, in the way of pressing and mounting plants, has been done by the students this term; but only a moderate amount, as our limited room did not give us the facilities for doing the work at the new building, for which reason what was done must be done at their homes and boarding places. Quite

a number have been taught the rudiments of taxidermy, not only this term, but during the whole year, as well as some general analytical work, outside of the class work. As heretofore, illustration and analysis have formed a prominent part of the work in Natural History, and the work spoken of above was that done besides what was given during the recitation hours.

During the Spring Term I have had about three hundred silk worms feeding, part at the school room, and part at my house. My object in doing this was to illustrate the manner of insect growth and tranformations, and at the same time give some instruction in Sericulture, a branch of industry that is beginning to receive considerable attention in this country. I had thought of using what eggs I may have another season, reserving a few for my own use, to distribute among such teachers as may wish to use them in the same way in their school rooms.

Very respectfully submitted,

G. H. FRENCH.

DEPARTMENT OF ALGEBRA AND ARITHMETIC.

ROBERT ALLYN, LL.D.,

Principal Southern Illinois Normal University:

DEAR SIR:—I have the honor to submit the following report of my department for the year ending June 12, 1884.

Whole number of pupils enrolled in the department during the year is as follows:

Number enrolled in Higher Algebra	40
Number enrolled in Arithmetic	372
Total number of pupils enrolled	412

Below is an exhibit of the number of pupils in the different classes, during the Fall, the Winter, and the Spring Terms respectively, together with the number of pupils passing grade:

	ENROLLED	PASSED
FALL TERM.		
Algebra, C, one class	35	26
Arithmetic, D, two classes	86	37
Arthmetic, C, three class	94	20
Arithmetic, B, one class	28	20
WINTER TERM.		
Algebra, B, one class	29	22
Arithmetic, D, one class	37	21
Arithmetic, C, two classes	91	39
Arithmetic, B, one class	50	30
Arithmetic, A, one class	18	14
SPRING TERM.		
Arithmetic, D, one class	12	2

Arithmetic, C, one class.....	52	6
Arithmetic, B, two classes.....	84	30
Arithmetic, A, two classes.....	37	28
Total pupils in class and passing.....	653	295

This shows about forty-five per cent. of enrollment, passing.

No pupil teachers of classes have been employed in the department during the year.

During the Fall Term the C class increased in number to such an extent that it became necessary to divide it into three sections, which was done. One section was placed under the instruction of Prof. James H. Brownlee, one in charge of Miss Inez Green, and the third I retained.

The work of the department required five hours of my time devoted to class instruction, during the Fall Term; it increased to such an extent in the Winter Term, that I found six hours too short a time to do good work, having the entire work in my own hands; the Spring Term, while it did not bring the same large attendance in recitation, yet required as much time to be expended upon the work.

The call for direct labor was so great at the close of the Winter Term, that I was obliged to seek relief; I found it in the person of Prof. John Hull, who kindly relieved me of the Algebra.

The aim throughout the entire work in Arithmetic has been to give the pupils that practical knowledge which is most beneficial in the business of life.

Thorough drill in the fundamental rules has been continued each term.

The operations in Common Fractions, and the writing and reading of Decimal Fractions, have both received special attention under improved methods.

Accuracy and rapidity in all calculations have been emphasized by frequent drills.

Business percentage has been formulated for the C classes, and rapid mental drill in class work has given a large proportion of the pupils in this division of the work a good degree of facility in all calculations in which 100 forms the basis.

In the discussions relating to Stocks and Bonds, Government U. S. Bonds, and Jackson County Bonds have been presented before the class and explained.

Pupils have been required to form problems of their own to illustrate the principles involved in the study of their lessons.

The C Algebra of the Fall Term, and the B Algebra of the Winter Term, were both very interesting, attributable to advanced age and a recognition of the value of time. These classes did good work while under my instruction.

I can not say so much for all my classes in Arithmetic, especially the D and C classes, composed largely of young pupils, who, I fear, did not fully realize the importance of a right use of their time.

The B classes did fair work during the three terms; many of this grade excelled in their character of work.

The A work was a part of the year's labor that was very encouraging; the young ladies and gentlemen manifested an earnestness certainly commendable. A feature quite interesting grew out of the fact that some of the members of the A classes had completed the entire range of the Arithmetic work required in the catalogue of the institution under the same general class discipline, and manner of instruction.

The instruction in the A classes consisted of the presentation of improved methods of work, and the free discussion of the same; the particular parts of Arithmetic and their most practical bearing upon a business life, and the clear, analytical processes in all operations. The work was compiled by the instructor, and copied by the student; and afterwards became a part of future class drills.

The pupils were required to give concise definitions and clear analysis for all operations in their class work.

I had charge of the A Spelling during the Fall Term.

The number of pupils in Spelling class..... 38
The number of pupils passed..... 21

During the Winter and Spring Terms I have assisted in dictating spelling in the assembly room, having in charge the D section.

Number pupils in Section D..... 71
Number of pupils passing to Section C..... 24

The following is a schedule of classes and hours of recitation in my department:

HOURS.	FALL TERM.	WINTER TERM.	SPRING TERM.
1	Arithmetic, D, Section 1	Arithmetic, C, Section 1	Arithmetic, B, Section 1
2	Algebra, C	Algebra, B	Arithmetic, A, Section 1
3	Hall	Arithmetic, C, Section 2	Arithmetic, A, Section 2
4	Arithmetic, B	Arithmetic, D	Arithmetic, D
5	Arithmetic, C, Section 1	Arithmetic, B	Arithmetic, C
6	Arithmetic, D, Section 2	Arithmetic, A	Arithmetic, B, Section 2

You will notice that the D class in the Spring Term was quite small. They were not very well advanced and I spent most of the term drilling them in Common and Decimal Fractions.

The C class needed a review of Denominate Numbers, and we spent a greater portion of the time during the term going over this work; hence we were not able to accomplish the work assigned us in the Syllabus. We agreed, as a class, that only those would be examined for the remainder of the regular work of this class who felt quite sure of their ability. This accounts, therefore, for the small number in the C class who passed grade.

The class, or the members rather, of this class, will do better work, if they return to the school another term, by beginning at Percentage.

Permit me to suggest that some means be taken to divide the classes, making the number of pupils in each class much less than it has been the past year; and further, that pupil teachers be provided by the teacher of the Training School, who shall take charge of some of the lower classes; and that these pupil teachers be under the general direction of the teacher in charge of the department. This action would facilitate instruction, and therefore render the department much more efficient in its legitimate work. The necessity of some action in the direction indicated above seems to be imperative, in order that this branch of our Normal instruction may be successful.

Respectfully submitted,

SAM'L M. INGLIS.

DEPARTMENT OF GEOGRAPHY, ETC.

ROBERT ALLYN, LL.D.,

Principal Southern Illinois Normal University:

DEAR SIR:—The following is presented as my report for the year 1883-84:

FALL TERM.

Geography, A	38
Geography, B	16
Geography, C	56
Algebra, E, two sections	45
Arithmetic, C	16

WINTER TERM.

Geography, A	27
Geography, B	36
Geography, C	40
Algebra, D	26
Algebra, E	18
Physical Geography	18

SPRING TERM.

Geography, A	39
Geography, B, two divisions	33
Geography, C,	22
Algebra, D, two divisions	24
Total	454

I also taught during the first part of the Fall Term a class in Language, which I was obliged to give up on account of the division of the Algebra class.

The work in Geography requires three terms—two in the Preparatory Department and one in the Normal course of study

The B and C classes are of the same grade. The C class taking up the study of Mathematical Geography in a not very extended form, with that of North and South America. The B class that of Europe, Asia, Africa and Australia, with special study of Illinois. The A class completes the whole work in one term. In this class, in addition to a thorough review, considerable attention is given to the methods of teaching. During some part of the term each pupil is allowed to give a practical demonstration of his own method of teaching the study. The class being allowed the privilege of criticising.

Map drawing is taught in all grades of our work. Some very excellent work has been done by the pupils in this line during the past year This work would have been carried on more extendedly if our facilities for map drawing were better.

The classes in Algebra complete the Elementary in two terms. The work done, although not entirely satisfactory, was, on the whole, good.

Respectfully submitted,

INEZ I. GREEN.

DEPARTMENT OF GRAMMAR.

ROBERT ALLYN, LL.D.,
Principal Southern Illinois Normal University:

DEAR SIR:—The following is a report of the work done in the Department of Grammar during the tenth year of this school. The classes were as follows:

FIRST TERM.

Analysis	17
Grammar, B	23
Grammar, C	48
Grammar, D, Div. 1	36
Grammar, D, Div. 2	42
Grammar, E	24
Spelling, E	31
Total	221

SECOND TERM.

Word Analysis	11
Grammar, B	47
Grammar, C, Div. 1	43
Grammar, C, Div. 2	47
Grammar, D	28
Total	176

THIRD TERM.

Grammar, A	29
Grammar, B, Div. 1	21

Grammar, B, Div. 2	29
Grammar, C	30
Grammar, D, Div. 1	20
Grammar, D, Div. 2	28
Total	157

The above table shows the total number of pupils under my instruction during the year to be 554.

One of these classes, Grammar E, was begun by Miss Green. Half the class came from the Training Department, and the other half was composed of those who were not well prepared for the higher work. At the close of the second month Miss Green wsihed to take a division of an Arithmetic class at that hour. There being no pupil teacher available, the Grammar class came to me for the last seven weeks of the term.

Considering the disadvantages under which our school has labored, the success in my work has been gratifying.

After the loss of our building, this department occupied the back room belonging to the office of Messrs. Barr & Lemma.

The larger classes were very much crowded in so small a room. Those near the stove must endure the heat, and those near the windows must permit a draught, as warmth and air were necessary and all space must be utilized. Three feet of blackboard, borrowed from a church, was the only place for writing, though it is so necessary in teaching the use of a language. Too much praise can not be given our pupils for the cheerfulness with which they endured the discomforts and overcame all difficulties by renewed application. Surely such men and women will do grand work in the schools of our State.

We have made no change in text-books this year, considering those in use among the many good ones.

Respectfully submitted,

MARTHA BUCK.

TRAINING DEPARTMENT.

ROBERT ALLYN, LL.D.,
Principal Southern Illinois Normal University:

DEAR SIR:—The number of pupils enrolled in the Training Department during the year 1883–84 was sixty-five. The enrollment for the Fall Term was forty-nine, for the Winter Term forty-three and the Spring Term forty-eight. These pupils were classified into six grades, thus forming thirty-two classes, including the one recitation of two grades of pupils taught German by Professor Bengel.

During the Fall Term nineteen pupil teachers assisted in hearing recitations; the Winter Term, sixteen; two of whom had charge of two classes each. The Spring Term eighteen assisted. Four of these pupil teachers continued their work the entire year.

Under the tutorship of these teachers the children progressed rapidly, and good behavior was secured. Many of them deserve praise for a wise use of the reference books and other works from our Library at their command to interest and benefit the pupils under their charge; also for the careful preparation in planning for the recitation, and the promptness and cheerfulness with which their duties were performed.

Though many deprivations were ours after the burning of our building, we had much to aid in carrying on the work of our department successfully. All the Library books were saved. A set of maps ordered at the beginning of the Fall Term was received after the fire, and was considered a very appreciable addition to our apparatus.

A very excellent outline for a four year's course in Elementary

Science, prepared by Prof. French, was carried out to some extent, with a great deal of satisfaction.

The success of the Spring Term's work was very marked, as shown by pupils and teachers in continued interest in daily work and the final examinations.

Respectfully submitted,

MARY A. SOWERS.

DEPARTMENT OF MODERN LANGUAGES.

ROBERT ALLYN, LL.D.,
Principal Southern Illinois Normal University:

The number of pupils instructed in this department was eighty-six; this number includes sixty-six pupils from the Normal School and twenty from the Training School. The number of pupils studying German was seventy; the number of those studying French was sixteen.

The number of recitations each day was five; four in German and one in French.

The method of our instruction is based upon the following sentence: "The acquisition of any foreign language, by such students as are already in the theoretical and practical possession of their native language, is a constant process of comparison."

Hence we can not, and will not agree with the underlying principle of the falsely so-called "Natural Method," viz: "Each foreign language should be acquired in the same manner as the native tongue." We are of the opinion, rather, that the theoretical and practical knowledge of the native language might be advantageously used as an auxiliary in the acquirment of the foreign language. At best, the result of the falsely so-called "Natural Method" can necessarily only be a mechanical, parrot-like acquisition of a language. Such a result, no matter how much it may dazzle the eyes of the ignorant, is nevertheless unworthy in the estimation of the true educator. On the contrary, we honestly endeavored that in our instruction every progress should be made with perfect conciousness, i. e., the pupil should know the "What?" the "Why?" and the "How?" Only in this way does the study become a wholesome discipline of the mind; what every study ought to be, and can be if properly taught. In the attempt to reach this

formal aim we have not for a moment lost sight of the material aim, which in modern languages consists in this, that the pupil should gain a practical benefit of the study, viz: to learn the language, to read, speak and write.

A simple, fluent, but consciously correct expresson of thought is what we were aiming at. The student should become able to keep up with and understand a conversation on common, every-day subjects; to read a popular book or a newspaper, and to read and write intelligently a letter or any other simple composition. To read the German or French Classics before the pupil is able to express his ideas in that foreign tongue in a simple but consciously correct manner, we consider unwise. The student, whose native language is English, would act very wrong to attempt to read Shakspeare before he is properly prepared for it. How much less should a student attempt to read too early the Classics of the foreign tongue, which he is going to learn.

"Before birds fly they must have feathers," hence we use as a reader in our German classes "Schmid's Narrations for the Youth," and in French "The Adventures of Telemachus," by Fenelon. The contents of these books are read, grammatically analyzed, and after this, made the basis for colloquial exercises.

In our most advanced German class, which is fortunately composed of very good material, we are happy to state, we have reached an unusually good result. If this class take the fourth and last term, there is not the slightest doubt that they will be able to read, speak and write the German language very creditably for the school, for themselves, and ourselves.

In conclusion, we mean to say that it can not be reasonably expected that any pupil in four terms can gain a perfect mastery in either German or French; but he may reach the above mentioned aim, and certainly become capable to work on his own improvement with good success; with consciousness and with perfect confidence. The period in which so much is gained, is in every branch of study, the time for the emancipation of the pupil from the teacher.

J. BENGEL.

June, 14th, 1884.

REPORT OF THE CURATOR OF THE MUSEUM.

ROBERT ALLYN, LL.D.,

Principal Southern Illinois Normal University:

DEAR SIR:—I would respectfully submit the following report upon the work done in this department for the year 1883–84:

Before entering into details upon the various divisions of work I would say a word upon student aid. Some years I have been assisted to quite an extent by those desiring to learn to do work in Natural History by doing it. When working on the Herbarium I had such aid in pasting specimens and labels on the papers and also in arranging them; and in shells similar aid was rendered in putting the shells in boxes and fitting the labels, leaving me to do the writing and recording in the catalogues. During the past year there has been less chance for such assistance for the reason that I have been working more at Taxidermy and other things where more knowledge of the subject was required in manipulation. I can say, however, that during the latter part of the year J. Arthur Snyder, of Farina, and Miss Hettie E. Stokes, who was a student a short time last year, have helped me in the Taxidermy work, both putting up several birds for the Musuem; and B. McLinnell, of Cobden, aided in putting up alcohol specimens. It may be better here to speak of the

BURNING OF THE MUSEUM.

It is hardly necessary to say that on the afternoon of November 26, 1883, fire was discovered in the roof over the south-east corner of the Museum. So long as it was safe to stay in the room every effort was made to save the building, and as a result nothing was saved from that room. This did not involve a total loss, however, of all our Museum materials, for I had considerable stuff

down stairs in my recitation room and the closet adjoining that which was saved. This material consisted of insects I had from the cabinet, and such as had never been classified, but upon which I was working at the time; some plants that had not been mounted and a lot of duplicates from the old stock, and a small amount of other materials, including boxes for shells and bottles and jars for alcohol specimens, etc. Shortly after the fire an itemized estimate of the loss was made out for the Board of Trustees, the total loss footing a little less than $15,000. I am satisfied that this is as much as $5,000 too small when we take into account the labor and time expended in putting the things in the shape they were.

SPECIMENS DEPOSITED.

About a month before the fire Mr. W. O. Rice, of Cobden, Ill., deposited his collection of what may be denominated Cliff Dwellers' Relics. For twelve years Mr. Rice had been working up this subject, collecting materials from every cliff that could have afforded a rude shelter to a people, who, from being less fortunate than their neighbors, did not dwell in tents from lack of means, or who attended those who dwelt in wigwams and raised up mounds of earth and stone as sepulchres for their dead. The collection of bones, shells, broken pottery, food, such as corn and the bones of food animals, remnants of clothing and arrow-heads and other stone implements, was extensive enough to enable a skilled Archeologist to form a pretty good idea of the habits and civilization of the Cliff Dwellers. The whole of this material was lost. From a correspondence with Mr. Rice after the fire I learn that he placed a money value of $500 on the collection.

The Fossils of Mammoth, deposited by Mr. John Borger, were also destroyed, as well as the valuable collection of copper specimens belonging to Mr. J. G. Allyn, and a quantity of fish and other specimens deposited by myself.

ARCHEOLOGY.

The first part of the above may be considered as a partial report on Archeology. Besides Mr. Rice's collection we had a fine collection of our own, consisting of a cast of the image found in Union County, a quantity of pottery, both from mounds and recent, pipes, mortars and pestles, spades, spear heads, arrow heads and other flint implements. These had been arranged in the west-

ern half of the bed part of two of the new cases that had been put in the Museum, and a portion of the lower part of one of them, the work being completed on the morning of the day on which the fire occurred.

MINERALS AND FOSSILS.

This collection, previous to the fire, was about as last year, save that a number of geodes from Warsaw, and a number fossils obtained by exchange, had been added. Besides these a few things had been added by donation. It is possible that a few of the minerals may be found to be harmed but little by the fire, when the debris is cleared away.

BIRDS, ETC.

Our collection of birds must have been represented by more than three hundred specimens, besides quite a number of mammals and other vertebrates. During the year I have mounted one hundred and fifty-one specimens. Thirty of these were mounted before the fire, leaving one hundred and twenty-one since. Nine of these were mounted for other persons in exchange for other specimens, but ten have been mounted by others for the Museum, and one that was on my desk was saved, giving us one hundred and twenty-three mounted specimens. I may say here that shelves have been put up in my recitation room for these and other specimens, that serve a very good purpose for temporary use, but when the building is plastered a part of them at least, should have glass in front of them, that we may be able to protect our specimens from dirt, and that we may display some things that it will not do to put upon open shelves.

BOTANY.

The whole of the mounted plants were burned—about three thousand specimens. It is possible that five hundred species might be mounted from the packages on hand before the fire, but not mounted yet. None of these have been mounted, but it will probably be best to do so next year, as they will be needed in illustration.

SEEDS, FRUITS, ETC.

All of those put up last year were lost, but a quantity of the inverted show bottles prepared for the seeds were saved, and

towards the close of the Spring Term forty-two bottles of seeds were put up, a few still remaining unbottled.

CONCHOLOGY.

Since the fire we have obtained one hundred and forty-five specimens of shells from Richter Lajas, Budapest, Hungary. These were received in exchange for plants from my Colorado duplicates. Besides these there is a box of shells, the number of species not known, that were received last year from Georgia, but were not mounted and placed in the Museum. These two collections, when mounted and placed behind glass doors, will aid us in illustrating Mollusca and be a nucleus for a new cabinet.

INSECTS.

I am sorry to say that our insect cabinet, together with part of the insects, shared the fate of the rest of the Museum. The twenty-two drawers from the cabinet, and the fifty small boxes I had down stairs, contained not far from two thousand species of insects. The part burned consisted of part of the Lepidoptera, Orthoptera and Diptera, and all of the Hymenoptera and Neuraptera. The portion saved consisted of part of the Lepidoptera, Diptera, Orthoptera as above, and all of the Coleoptera and Hemiptera. The one drawer out of the four of Diptera that was saved, contained the Tabanidae, including Mr. John Marten's type specimens. Quite a number of type specimens were lost in the Hymenoptera, Lepidoptera and Orthoptera.

Since the fire quite a quantity of material has been received from Prof. S. A. Forbes, Curator of the State Museum of Natural History, among which are several boxes of insects, mostly Coleoptera, and also exchanges have been received from Mr. F. M. Webster, of Normal, C. W. Strumberg, of Galesburg, for European Coleoptera, and of H. K. Morrison, of Morgantown, N. C., for Diptera. Some of these exchanges had been arranged for before the fire but only completed after that event.

DONATIONS.

It is possible that in the press of work under which I have been laboring this year, some names have been overlooked in recording what has been so kindly furnished us by our many friends. The amount of aid offered us from nearly all parts of the United States and Canada since the calamity that befell us, is very en-

couraging, and I would take this opportunity to again express our sincere thanks for the aid and encouragement we have received from so many sources. In some instances the articles offered were not in the list of our losses, and consequently we could not accept them on the terms of the offers, but the spirit in which the offers were made showed none the less the sympathy that was felt for us.

In other cases the things offered were received and formed valuable additions to our meager stock of material for illustrations in Natural History. If any names are omitted in the following list, let it be understood that it is not intentional. I may say, before appending the list, that there are some things promised that are not yet received, and for that reason will go into the list for another year when received.

Nellie Barrett—Sphinx Plebeia.

Prof. C. W. Jerome—Rhinoceros Beetle.

Elmer Wooton—Stag Horn Beetle, Chipmuck, and Minerals and Fossils from Missouri.

Miss S. A. Moore, Gainesville, Ark.—A large Spring Beetle.

Dr. M. G. Parsons—Stag Horn Beetle.

H. Tait—Cecropa larva, two Hairy Woodpeckers, Patridge and two White Rabbits from Canada.

Geo. Graham—Polyphemus Moth.

Wm. Hyers—Horseshoe Crab.

Jennie Wait, Greenville,—Polyphemus Moth.

A. A. Starkweather—Larva of Royal Walnut Moth.

Miss Kate Ingersoll—Mineral Wool (asbestos) and several insects.

John P. Stelle, McLeansboro,—A Mantis.

A Hudson—A large Spider.

Hellen Bryden—Heath from Scotland.

J. B. Gill, Murphysboro,—Royal Walnut Moth larva.

Charles Prickett—Royal Walnut Moth larva.

G. W. St. John, Centralia,—Limacocles larva.

John H. Jenkins, Elizabethtown,—Pipe Iron Ore.

A. B. Parmlee—A large Spider.

J. Arthur Snyder—A Snake and several Birds.

May Rumbold—Larva of Apatela Americana.

Mr. Wier—A Coot.

Cora Hamilton—A Spider.
S. Hewitt—Woodcock and Spoon-bill Duck.
Harry Campbell—A Myriapod.
Richard Toney, Marion,—Hornets' Nest and a Barred Owl.
S. E. North, Jr.,—Quail and Screech Owl.
Capt. Wm. Talbot, Dry Hill,—Indian Disc.
G. W. Smith, Murphysboro,—A Fossil Shell.
John M. Dixon—Hen Hawk.
R. G. Sylvester—Wood Duck.
Willie McCrea—Yellow Hammer.
Dr. James Robarts—Barred Owl.
E. H. French, Lawrenceville,—Flying Squirrel and a number of Birds and Insects.
Wm. Hewitt—Mallard Duck.
Rev. W. Whitney—Pipe Stone from Pipe Stone county, Minn.
A. L. Brougher, Opedyke,—Bald Eagle.
Hettie and Sherman Stokes—Several kinds of Seeds.
Mrs. E. Robertson—Yellow Bellied Woodpecker.
Thomas Brewster—Cermatia Forcipes.
B. S. Mann—Quail, Golden Winged Woodpecker, Redheaded Woodpecker and Coot.
Wm. Bryan—Black Mallard and six other Ducks.
Edward Maroin—Golden Winged Woodpecker.
S. T. Brush—Green Winged Teal.
M. C. Lydick—Canary.
Miss Lizzie Sheppard—A large Onion.
Dr. G. M. O'Hara—Three Gold Fish.
James Ford, Muirkirk, Canada,—Two Black Squirrels and one Red Squirrel.
E. Keown and H. Prickett—Two Horned Owls.
H. Prickett—Bittern.
D. J. White—Bittern.
Frank O'Hara—Spider, Coot and two Flying Squirrels.
W. P. Rouse—Yellow Crested Night Heron.
John Willliams—Bittern.
Walter White—Two Virginia Rails and one Carolina Rail.
Mrs. J. Robertson—Maryland Yellow Throat.

Louie Linnell, Cobden,—Ruby Throated Humming Bird.

J. A. Jones, Cobden,—Mourning Warbler.

E. C. Toothaker—Large Spreading Adder.

Hester Perry—Rhinoceros Beetle.

Thos. Perry—Two Carolina Rails.

A. Gassaway—Red Bat.

Dr. Robert Allyn—Snapping Turtle.

Mrs. Delia Toney—Four Leeches.

Augustus Schwartz—Leech.

Prof. S. A. Forbes, Normal,—Two boxes and one can of material sent for illustration after the fire, and consisting of bird skins, Star Fihes, and other radiates, fishes, mollusks, etc.

C. W. Butler, Anna,—Thirty-seven specimens of bird skins.

F. M. Webster, Normal,—Beetles.

J. J. Nassbaumer, Mascoutah,—Two peculiar pecan-like nuts.

Miss Mary E. Kelsey, Melrose, Mass.,—A small package of Pressed Plants.

Respectfully submitted,

G. H. FRENCH.

CALENDAR FOR 1884-85.

Fall Term begins Monday, September 8—ends Friday, December 19, 1884.

Holiday Recess begins December 20—ends January 3, 1885.

Winter Term begins January 5, 1885—closes March 20, 1885.

Spring Term begins March 23, 1885—closes June 11, 1885.

Examinations for the year begin June 8, 1885.

Annual Commencement, June 11, 1885.

ANNUAL REPORT

—OF THE—

PRINCIPAL AND PROFESSORS

—OF THE—

SOUTHERN ILLINOIS NORMAL UNIVERSITY

—AT—

CARBONDALE, ILL.,

—MADE TO THE—

BOARD OF TRUSTEES,

JUNE 11, 1885.

CARBONDALE, ILL.:
FREE PRESS PRINT.
1885.

SOUTHERN ILLINOIS
UNIVERSITY LIBRARIES
CARBONDALE

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ANNUAL REPORT

OF THE

SOUTHERN ILLINOIS NORMAL UNIVERSITY.

To the Board of Trustees:

GENTLEMEN:—The close of another year brings the return of a statement of the condition of the school and its work. The Faculty and students have continued their duties in the temporary building, provided so nobly by the citizens of Carbondale. It has served a useful purpose, though altogether too small and imperfectly furnished. During the summer vacation it was plastered, and many more shelves were put in, for the books of the library and museum. These improvements made it warmer, more convenient and rendered the rooms less accessible to the noise of work carried on in the different parts of it, and have certainly been worth to us more than the cost.

The regular work of recitations has gone on with the usual good feeling between the students and Faculty, and, as we believe, with even more than the ordinary success of their work on the part of both. The number of students has aggregated something less than during the last year. But the smaller classes were in the autumn and winter, while the spring term was larger than last year; and what is still more promising, there has been during the present term an increase of those who had been engaged in teaching, and who are proposing to make this calling their permanent occupation. This has been very gratifying to the Faculty, as it shows the increasing pressure of public opinion, urging teachers in the public schools to make a more thorough preparation for

their work; and it also indicates that those who have begun the duties of this most exacting calling, see at once that they can not discharge the duties required without a larger fund of knowledge and greater study of methods than the ungraded schools afford, or than they acquire at the ordinary schools for the teaching of science. The observation of such persons has shown them that they need a discipline, and an instruction, too, specially directed to the work which they have in hand, and hence they have come to us and have given their attention to methods with great profit. Science may be learned elsewhere, but methods of teaching it can only receive proper attention in a Normal school, except as they are learned by simple, unaided observations made by the student while his chief attention is absorbed in studying the work of his teacher in the recitation room, and are imitated from the manner of the teacher as the pupil remembers it afterwards. The number of these persons who have been engaged in teaching in the public schools during the past year, and who are with us this spring is something more than fifty, and their presence proves that they not only feel the need, as has been said, of more specific instruction, but that the public, and the teachers' profession, have seen our work during the last ten years and have found our methods exactly adapted to the wants of teachers and to the public schools of this section of the State.

Another thing has given us general satisfaction—the better preparation of the students who come to us, more particularly their better understanding of the elementary branches. It may not be inappropriate to cite an example, selecting what is very commonly called the lowest of the practical tests of scholarship, but which does in reality show the finish and completeness of the early discipline, and the patient faithfulness of both teacher and scholar to produce it—good spelling. When our first regular session of the University opened in September, 1874, we examined one hundred and two students whose ages averaged about nineteen. The test was fifty words selected from a daily newspaper printed the previous day, and they were pronounced to the class at the rate of four words a minute. The result was that sixty-seven per cent. of them were spelled incorrectly. At the opening of the current term we examined eighty-two. The test this time was a longer one and therefore tried persons unaccustomed to it much

more severely. It was one hundred words selected in the same way and given out at the rate of six words a minute. The age of the candidates was nearly the same—possibly, however, a quarter of a year less. The per cent. of words misspelled was only twenty. Perhaps equal progress has not been seen in the other branches of the common school studies, because in those schools more attention to them is usually given. But there certainly has been a large improvement in the written examination papers which those now entering prepare. This is mostly manifest in the methods of writing, punctuation, and general finishing of the work. All this is gratifying to the Faculty and gives them great encouragement.

Contrary to our hopes, the General Assembly has not yet passed a bill to appropriate money for our current expenses or for rebuilding. We have no doubts but that this will be done, as both bills, giving the amount which the Trustees asked for, have been passed by the Senate and are now on their second reading in the House.

The several departments of the school have been as usual well conducted. The professor of Ancient Languages has been employed with even more than his ordinary diligence, having been at his post early and late. There is apparently a slight falling off in the zeal for the study of Greek, and the professor has recommended that hereafter Greek be omitted from the Course, and that the students who wish to pursue that study shall be required to pay tuition. This suggestion has been adopted by the Faculty.

The Higher Mathematical department is now joined with the Pedagogical and Training departments and has proceeded with its accustomed regularity and system. It has never been more effectively handled, nor has it in any year, as our graduating class will show by their methodical training, done better work or had better students.

The department of Chemistry, Physics and Book-keeping has been conducted in quarters so contracted as at first sight to seem to render it impossible to do any of its special work with real profit. But by the ingenuity of the professor and the good nature of the pupils, the little laboratory has been sufficient to give excellent illustrations of science pursued under difficulties.

The department of Reading, Elocution, Vocal Music and Rhetoric has been steadily carried forward in an energetic and finished manner, and there is a marked advance in the ability of our students, both to read with force and grace and to write with clearness and propriety.

The department of Grammar has never made in any year longer steps toward correctness in speaking and in writing the English language. It has been crowded with diligent and aspiring students, who have been deeply impressed by the earnestness of the teacher, and, I am sure, will make themselves felt in our public schools, to induce a more accurate habit of speech.

The department of Natural History has if possible more than any other excelled in the quiet power with which it has been pushed forward. The Professor who, it is proper to say, is recognized as a master in his work from New Brunswick to California, has devoted every hour to research and instruction. He has added a large number of excellently mounted specimens to the Museum, and his work can hardly be too highly praised.

The department of History has proceeded with the ordinary routine of work in a manner of more than its customary ease and good-natured efficiency. Some new maps and methods have been introduced, and the study of the Constitutions of the State and Nation has been added to the Course.

The teacher of Arithmetic and Algebra has given much more than the school hours to his duties, and has brought into the work of his room very much of needed systematic method. The scholars are made not only quick at figures, but are taught numbers as well, and they learn also the philosophy of the operations upon them.

The department of Geography and of Elementary Algebra has done its work in a manner that can hardly be improved, moving as noislessly almost as the globe itself, and giving to those who enroll themselves in it such a comprehension of the facts of the world as adds to the interest of everything done in this study.

The department of Modern Languages has increased very considerably under the vigorous and philosophical management of the practical teacher who conducts it. The German language is largely in demand and is taught so as to give an insight into the intricacies of English as well, and the philosophy of language in general.

The department of Drawing and Penmanship has been still further systematized during the year, and it is proper to say has now for the first time become settled into a regular and normal line of work, having a definite end and a philosophical method of approaching it. The drawing is not yet fully appreciated by the people, and this is one of the reasons why it has seemed impossible to give the certificates of one, two and three years' courses of study which the Faculty have made provisions for.

The Training department has done its work with better satisfaction than ever, and has given better facilities for our students to observe and begin the practice of their chosen profession. I speak of this further on.

All these departments, both for their teachers and their pupils, deserve great praise, and might be even more highly complimented, but these instructors are in such close relations to the principal, and have rendered such active and cheerful service, which, during the last part of the year more particularly—owing to repeated absences—have been so often accepted, that to praise them seems too much like confessing to my own personal lack of attention to work. Their unselfish devotion to the interests of the school and of education in general, their zeal for the progress of every scholar and their individual interest taken in the pupils are beyond the reach of words to do them justice. They have been diligent in labor and duty and merit the gratitude of all.

The number of students has slightly decreased for the last year, there having been 464 against 540 the year previous. But the Spring term showed an increase—322 this year against 313 last year. A portlon of this falling off in numbers is due to the fact that by request of the State Superintendent of Public Instruction we held no Special Session for Normal study during the summer of 1884. Fifty-nine students attended our session of 1883, and if they are added to our 464, we should show 523 as against 540, a loss of only 17. A comparison of the two years is by no means discreditable to the one now closing, especially when we consider that during the year 1883-4 our beautiful building burned, and that since we have been so inconveniently crowded into a temporary structure, which, though capable of holding more students than we have had, and being an evidence of the large-hearted liberality of the citizens of Carbondale, is, nevertheless, very contracted and

very incomplete. The numbers enrolled each term of the scholastic year 1883-4 were as follows: Fall Term, 362; Winter Term, 327; Spring Term, 313. For 1884-5: Fall Term, 313; Winter Term, 292; Spring Term, 322. Grand total for 1883-4, 1002; grand total for 1884-5, 927, a difference of 75; but the average time during which each remained was in the last year longer by three weeks. The average length of attendance during 1883-4 was 23 weeks, that of 1885-5 was 26 weeks. The fear and uncertainty excited by the fire are probably largely the causes of this difference. Our graduates were sixteen last year, and this year they are ten, six ladies and four gentlemen.

The Training department under Professor Hull and his genial assistant, Miss Krysher, has continued to be a success. Each seat has been occupied every week, and a few children have been temporarily placed on chairs and stools in anticipation of vacancies which might be expected in the near future. For at the beginning of each Term there have been more applications for admission than our desks could accommodate, and hence parents were willing to permit their children to suffer some small discomforts with the hope of vacancies, which almost invariably occur during the progress of a Term on account of sickness or unexpected removals. This department has been invaluable to us in many ways. It has afforded to our Normal students opportunities for observing methods of teaching as practiced by our long experienced teachers, and also by beginners, as they themselves are. This observation work, required of every student, is to him of large use. He sees how topics are presented; how questions are asked by the teacher to find out what the young pupil knew beforehand, what he has learned from the previous lesson and from the book by his own study; how the review of the previous lesson is brought in, and how the scholar is directed to the next, and prepared for it, so as to connect the series of lessons into one logical whole, and not to leave each chapter a fragment of a subject and all the lessons a disjointed mass of chaotic elements; how the teacher does, by his voice and manner, eye and hand, manage to control, to stimulate, to praise, to encourage, to rebuke even, and to inspire without scolding, or frowning, or hectoring, or oppressing the spirits of the classs. All this and more he learns by this observation exercise, in which he is guided by the superintendent of the

department or the assistant, or by the principal; and then he is required to write out these criticisms for the inspection of the superior officer, and for his remarks and criticisms.

In the next place the Normal student must himself actually teach and control a class in this department. He does this frequently under the eye of the superintendent, and is subjected to a searching but kind criticism of his manners, his methods, his questions, and his answers to the queries of the children, when these are made. He is specially instructed not to imitate another, not to follow a book too closely, nor to depart far from the lesson text which has been prescribed for the scholar to study. Every good point in his work is commended and every fault pointed out. And he is told how to avoid the latter and how to pride himself on the former so as not to become a hobby rider or an egotist.

These are great advantages to the Normal students, and while our professors, as they usually do, perform their duties faithfully no harm, but rather a benefit, comes to the young pupil in the Training department. For we have found under this practice that the smaller scholars are well taught, orderly, accurate, enterprizing and thoughtful in general beyond their years, and often beyond others who come to us from other schools. They do not always show quite as ready a memory of the mere words of a book to be repeated before visitors as may often be the case in other schools; but they do think on current matters and become able to express their thoughts or handle their knowledge in a manner most creditable to themselves and to those who have been engaged in teaching them. No part of our work, as seems to me, deserves more praise or accomplishes a better result. And this must be of great value to communities in which these pupils of ours who have thus been trained to even a little practice teaching before they seek to become independent teachers, are employed.

This work of our Normal students—in observation and practice—impresses us more emphatically than ever with the importance of a Normal training for every teacher in all our public schools. The report of the Superintendent of Public Instruction for 1883–4 shows that about 3000 new teachers enter on the work instructing our children every year. A large part of these must come directly from the ungraded schools, as must almost by a necessity be the case in the absence of a law requiring a definite

training for the office of a teacher, and in consequences of the small wages paid to teachers, as well as because of the low standard of qualifications for this sacred office as held by public opinion. They will, therefore, of course, have not an item of preparation for their specific work, save what they have observed by an unconscious process, as they themselves have been taught and have studied under others who had before them been instructed by teachers with the same entire want of special training. At best they must be imitators of unphilosophic methods and improvised expedients, both of explaining difficulties and of governing and influencing. How illogical such a practice is, and how clearly it must be unprofitable, if not disastrous, to any community need not be asserted. And in proportion as the schools are supplied with uninstructed teachers must the damage be to the interests of the State and Nation. What would be thought of a house painter who should set a boy of twenty to mix leads, oils and pigments and lay the colors on a house, after having looked on to see how the master was doing the thing, without himself having received any instructions or directions as to the nature of these materials, or the manner of grinding them together, or of spreading them on surfaces of wood or brick and mortar? Yet this enlightened and civilized community of ours, loving and prizing its children far more than it does its dwellings, entrusts the most delicate, the noblest, the most important of all the work of human society—the teaching and governing, the discipline and development of its children—to the novice in knowledge and to the one who has absolutely no experience whatever in the work; doing this, not always nor altogether because he wants a place to work, but simply because he or she wants the wages, or possibly the statement would be nearer the truth if it should be written, because the father or other relative wants the son or daughter to enjoy the dignity or gain the emoluments of the teacher's position! In our Training department the young man or young woman gets some experience, and becomes more or less thoughtful as to the great work which he proposes to undertake, and more or less regardful of its high duties and its grave responsibilities. And in our Normal classes he gets also two or three other things: (1) A fair knowledge of the human mind and body—its impulses and desires—its singular self-assertive independence and

distrust of any outside interference obtrusively thrust upon it—its freaks of affection so often misplaced and yet so controlling of its destiny; its almost inconsistent love of nerve-exhausting excitement, and its almost vegetable longing for sleepy ease and idleness—its power of patient work and daring, and its fickle liability to change with the whim of a moment. (2) He learns that in the school room he is not to handle dead matter nor control brute stolidness, nor yet the docility of the domestic animal. It is a human will he is to master, and yet not himself to be the master of it, but to make it the self-centered master of itself and all its powers; not an intellect that he has to inform, but a life force to build up and launch into an independent activity which shall move among other independent activities, and give to them, as it demands for itself, all the rights and privileges of independent and self-acting existences. (3) He learns, therefore, that he is not simply to lecture and impart information, but to arouse attention, to control waywardness, to regulate habits, and train, discipline, strengthen and establish a character. He is, while with us, constantly impressed with the thought that his duty as a teacher is to develop the whole nature of the child—leaving it still a child—so that it shall instinctively exercise its divinely given love of right and truth and activity in the proper directions as a child—not as a prig of a man or woman, a youthful pedant or an incipient philosopher. He is made to remember that as a teacher he is to help the family to do its duty, not to assume that duty and remove from parents the responsibility. He must know the relations of the teacher and citizen, the parent and the school, and so encourage all these social agencies that the home life and civil life shall make the child perfect—always a genuine child—not a genius or a show specimen—not a young Macauley of an omnivorous memory and egotistic self-assertiveness—nor a waspish poetaster like young Mr. Pope—but a child obedient to law, patient of proper restraint, active and helpful in all the little and large, all the perplexing and agreeable duties of home and society—a child loving green apples, if you please, and fond of making mud pies and plashing muddy water over himself and his companions, finding his fingers strangely contractile in proximity to the cat's tail—but yet a child, honest as God makes children at first, not afraid to tell the truth and love a friend, a child wide awake as nature compels

him to be, and as industrious as the restless instincts of his own being incites him to be, as playful and ebullient as the growing force of a day in April. In fact, the teacher is to be taught to manage this strange mystery, this child, this human nature, his very own in all affinities, so that all its individual steam power—rising even to one hundred and forty pounds to the square inch—shall neither burst the boiler, nor derange the machinery, nor carry the train at a destructive speed.

How is a boy or girl of sixteen or twenty, without special thought and definite training to know what childhood is, and what it means to be a teacher? How can he teach properly, so as to make a generation better than the past one, unless he has himself been taught the knowledge and the methods of communicating it better than had been common before him? How is a person who has attended an ungraded school, merely to know something of the connection of the sciences, their order of succession and the special laws of their development, and the particular times or ages when the mind opens for understanding each one—how can even a graduate of a common college, pressed as he is by the multitude of studies—language, mathematics, physics, sciences—find time to know or even get a hint of what a teacher needs to acquire in this direction of practical knowledge of school room duties? Besides this, there are methods of applying motives to stimulate the good, to repress the bad tendencies in every nature, to awake interest in each study, and to control and affect each differing temperament, so as to govern all dispositions and to harmonize all antagonisms. All this is a work of great wisdom, and needs both knowledge and thought, practice and advice in the largest measure. It is not wholly a gift of intuition, bestowed on favored natures by a beneficent Creator, and it can not be learned by any blind or careless imitation of even the best of teachers. Imitation neglects essentials, forgets principles and follows appearances. If there is one folly of a people intelligent beyond any other age, and progressive almost beyond the imagination, loving its children more than its own eyes, and expending a prodigality of money to give them education, far better than their fathers had, it is this of supposing that a little going to school, simply to learn for their own pleasure and profit, can make teachers! Or, worse, if possible, that a drill for a few months, sometimes only

weeks, under another's control, can fit a young man before his beard is grown, or a young woman before she has got beyond the craving to eat chalk or slate pencils, to master, to govern, and to fill with character a school of sixty restless, eager, and almost irrepressible children? We give our little ones into the hands of youth, oftentimes in their callow and foolish age, and it is a marvel of the recuperative energies of human nature that all are not spoiled. We must demand for our teachers more knowledge indeed; but above all more of thoughtfulness and more of real study for their work. They need some time for careful consideration of their position, their work and their duty, and we claim that the Normal School is the best place in which to get at least a portion of this. With this remark I close this report.

The Faculty recommend that the Trustees shall decide hereafter to grant Diplomas to none but such as complete the Pedagogical course.

They also advise that there be two courses of study, one a Fall course of three years, and a Short course of two years, each of which shall entitle to a Diploma correspondent to the course.

They further recommend that hereafter the Greek language shall not be reckoned necessary as a part of the course of study.

The following persons, who have completed in a manner satisfactory to the Faculty the respective studies required for the following named Diplomas, are hereby recommended to receive at the hand of the Principal on Commencement Day the said Diplomas, viz:

Classical and Pedagogical—Gertie Hull, Carbondale; Mary A. Robarts, Carbondale.

Classical—Ada L. Dunaway, Carbondale; William R. Fringer, Tower Hill.

English, Pedagogical and Latin—Mary I. Buckley, Marion; Kate Thomas, Carbondale.

English and Latin—Tilmon A. Lancaster, Dunbar, Tenn.

English and Pedagogical—Helen Bryden, Carbondale; John E. Miller, Caseyville.

English—Rurie O. Lacey, Elizabethtown.

Your obedient servant,

ROBERT ALLYN.

The following is a record of the bills which have been examined by the Auditing Committee and recommended to be paid by the Board of Trustees, and according to the rules, have been by me assigned to the particular accounts to which they belong:

ORDERS FOR PAYMENTS OF INCIDENTALS.

1884.	July	1.	L. N. Ackerman	Order No.	1244	$ 6 25
"	"	1.	M. A. Sowers	" "	1246	4 35
"	"	3.	A. Campbell	" "	1247	30 00
"	"	8.	Newell House	" "	1248	12 00
"	Sept.	18.	Jackson County Era	" "	1257	3 00
"	"	18.	Simeon Walker	" "	1258	8 00
"	"	18.	Robert Allyn	" "	1259	117 37
"	"	18.	Robert Allyn	" "	1260	29 00
"	"	25.	John H. Barton	" "	1264	146 50
"	"	25.	A. H. Andrews	" "	1266	50 00
"	"	25.	Isaac H. Rapp	" "	1267	2 50
"	"	30.	Thomas Kane & Co	" "	1269	33 00
"	Oct.	6.	W. H. Hudson	" "	1272	24 20
"	"	6.	R, P. Studley & Co	" "	1273	8 50
"	"	8.	A. B. Chase	" "	1274	20 00
"	"	20.	Wm. M. Rapp	" "	1275	6 15
"	Nov.	13.	J. S. & A. F. Bridges	" "	1279	16 85
"	"	26.	Samuel Asbell	" "	1283	20 00
"	Dec.	8.	Simeon Walker	" "	1284	6 00
"	"	10.	Robert Allyn	" "	1288	70 20
"	"	10.	C. A. Sheppard	" "	1290	51 50
"	"	18.	J. H. Barton	" "	1294	11 00
"	"	18.	Samuel Asbell	" "	1295	20 00
1885.	Jan.	5.	E. P. Purdy	" "	1296	27 50
"	"	5.	W. H. Hudson	" "	1297	29 70
"	"	7.	D. B. Parkinson	" "	1299	10 15
"	"	29.	Samuel Asbell	" "	1306	20 00
"	Feb.	18.	C. A. Sheppard	" "	1309	37 35
"	March	1.	Samuel Asbell	" "	1311	20 00
"	"	10.	R. P. Studley	" "	1312	8 00
"	"	10.	Robert Allyn	" "	1313	71 17
"	"	30.	Samuel Asbell	" "	1317	20 00
"	April	27.	J. S. & A. F. Bridges	" "	1321	16 06
"	"	37.	E. J. Ingersoll	" "	1353	13 50
"	"	27.	C. C. Campbell	" "	1324	19 50
"	"	27.	Samuel Asbell	" "	1325	20 00
			Amount carried forward			$ 1009 30

			Amount brought forward			$ 1009 30
1885.	June	1.	Robert Allyn	Order No.	1327	$ 27 90
"	"	1.	Samuel Asbell	" "	1329	20 00
"	"	1.	C. A. Sheppard	" "	1330	50 10
"	"	1.	Sam. T. Brush	" "	1332	60 00
"	"	4.	E. J. Ingersoll	" "	1333	10 00
"	"	4.	C. W. Williams	" "	1334	15 00
"	"	4.	J. H. Barton	" "	1346	99 00
			Total			$1291 30

APPARATUS.

1884.	July	1.	D. B. Parkinson	Order No.	1245	$ 9 40
"	"	10.	A. H. Andrews & Co.	" "	1250	247 62
1885.	Feb.	25.	M. G. Parsons	" "	1310	40 12
			Total			$297 14

LIBRARY.

1884.	July	10.	A. H. Andrews & Co.	Order No.	1249	$247 62
"	Sept.	8.	Robert Allyn	" "	1262	95 69
"	Oct.	6.	James Ennisons	" "	1270	225 03
1885.	Feb.	2.	James Ennisson	" "	1307	83 05
"	Apr.	27.	Charles Allyn	" "	1320	22 95
"	Jan.	1.	Robert Allyn	" "	1328	42 49
"	"	1.	Robert Allyn	" "	1331	31 00
"	"	12.	J. H. Barton	" "	1345	272 00
			Total			$1019 83

MUSEUM.

1884.	July	10.	A. H. Andrews & Co.	Order No.	1251	$123 86
"	Aug.	23.	G. H. French	" "	1256	18 06
"	Sept.	8.	Robert Allyn	" "	1261	84 85
"	Oct.	6.	James Ennisson	" "	1271	79 30
"	Nov.	10.	G. H. French	" "	1289	50 80
1885.	Jan.	19.	O. Barbour	" "	1303	12 35
"	Mar.	11.	E. Patten	" "	1314	15 00
"	Apr.	27.	G. H. French	" "	1322	27 73
"	Jan.	11.	G. H. French	" "	1339	7 39
"	"	"	L. B. Ford	" "	1347	60 00
			Total			$ 479 34

SALARIES.

1884.	July	11.	Pay Roll for	July.	Order No.	1252	$1517	45
"	Aug.	23.	" "	Aug.	" "	1255	1517	50
"	Sept.	22.	" "	Sept.	" "	1263	1565	50
"	Oct.	21.	" "	Oct.	" "	1276	1565	45
"	Nov.	18.	" "	Nov.	" "	1280	1565	55
"	Dec.	8.	" "	Dec.	" "	1285	1565	55
1885.	Jan.	20.	" "	Jan.	" "	1305	1565	45
"	Feb.	13.	" "	Feb.	" "	1308	1565	50
"	Mar.	18.	" "	Mar.	" "	1315	1565	55
"	Apr.	23.	" "	Apr.	" "	1319	1565	45
"	May	20.	" "	May	" "	1326	1565	50
"	June	4.	" "	June	" "	1335	1565	55
			Total				$18690	00

REPAIRS.

1885.	July	28.	James Ennisson		Order No.	1253	$146	62
"	Sept.	25.	Goe & Nelson		" "	1265	455	00
"	"	30.	Patrick Leary		" "	1268	10	60
			Total				$ 612	22

CARE OF GROUNDS.

1884.	July	28.	James Ennisson		Order No.	1254	$301	50

FUEL.

1884.	Nov.	6.	Carbondale C. & C. Co.		Order No.	1277	$76	94
"	Sept.	6.	James Robarts		" "	1278	28	51
"	"	24.	Carbondale C. & C. Co.		" "	1281	40	50
"	"	24.	James Robarts		" "	1282	15	00
"	Dec.	10.	Carbondale C. & C. Co.		" "	1286	40	01
"	"	10.	James Robarts		" "	1287	14	82
1885.	Jan.	13.	Carbondale C. & C. Co.		" "	1300	34	50
"	"	13.	James Robarts		" "	1301	17	80
"	Mar	24.	W. H. Hudson		" "	1316	13	35
"	"	30.	Sam. T. Brush		" "	1318	210	65
			Total				$ 492	08

TRUSTEES' EXPENSES.

1884.	Dec.	11.	R. D. Adams		Order No.	1291	$ 29	46
"	"	11.	Thomas S. Ridgway		" "	1292	29	50
"	"	11.	James Robarts		" "	1293	25	00
1885.	Jan.	5.	James Robarts		" "	1288	25	00
			Amount carried forward				$ 108	96

		Amount brought forward			$108 96
1885. Jan.	16.	James Robarts	Order No.	1302	20 00
" "	19.	H. C. Fairbrother	" "	1304	28 00
" June	11.	Thomas S. Ridgway	" "	1337	16 75
" "	11.	John Murer	" "	1338	50 00
" "	11.	H. C. Fairbrother	" "	1340	39 00
" "	11.	E. B. Green	" "	1341	50 00
" "	11.	Mary I. Buckley	" "	1342	50 00
" "	11.	Samuel P. Wheeler	" "	1343	5 00
" "	12.	E. J. Ingersoll	" "	1344	35 35
		Total			$ 403 06

RECAPITULATION.

Salaries	$18690 00
Repairs	612 22
Fuel	492 08
Library	1019 83
Apparatus	297 14
Museum	479 34
Trustees' Expenses	403 06
Care of Grounds	301 50
Incidentals	1291 30
Total	$23586 47

An enumeration of the students whose names have been entered on our books shows that there are two thousand four hundred and sixty-five, of all ages and grades, enrolled. Eighty-six were only in the Special Normal Institutes held in the summer vacations. Two hundred and twenty have entered in the Training or Model department and have gone no higher. These, however, are all reckoned in the tabulated statements below. Including all these, the average of age is about nineteen and three-fourths years. The youngest admitted have been between seven and eight; of this age four entered. The oldest was fifty-two, and another over fifty. The larger part, by far, have been between fifteen and twenty-one. Our record aims to keep answers to four questions, the results of which are tabulated below: I. From what counties and states do they come? II. Where are they now living? III. What are the occupations of their fathers? IV. What are the students now doing?

I. WHERE FROM.

Alexander	52
Bond	4
Brown	2
Bureau	1
Champaign	1
Clark	7
Clay	15
Clinton	44
Coles	3
Cook	2
Crawford	4
Cumberland	3
DeWitt	2
DuPage	
Douglas	1
Edgar	3
Edwards	8
Effingham	14
Fayette	56
Franklin	58
Fulton	2
Gallatin	36
Hamilton	12
Hardin	22
Hancock	1
Iroquois	
Jackson	687
Jasper	4
Jefferson	81
Jersey	2
Johnson	71
Kankakee	1
Knox	2
Lawrence	13
Logan	2
Macon	2
Macoupin	10
Madison	27
Marion	77
Massac	24
McLean	2
Monroe	15
Montgomery	5
Moultrie	2
Peoria	1
Perry	106
Piatt	2
Pope	9
Pulaski	35
Randolph	120
Richland	22
Sangamon	
Saline	36
Schuyler	2
Shelby	10

II. WHERE NOW.

Alexander	24
Bond	4
Brown	2
Bureau	
Champaign	2
Clark	5
Clay	7
Clinton	36
Coles	3
Cook	17
Crawford	4
Cumberland	3
DeWitt	2
DuPage	1
Douglas	1
Edgar	3
Edwards	10
Effingham	19
Fayette	42
Franklin	48
Fulton	
Gallatin	37
Hamilton	13
Hardin	21
Hancock	1
Iroquois	1
Jackson	575
Jasper	4
Jefferson	66
Jersey	5
Johnson	65
Kankakee	3
Knox	2
Lawrence	17
Logan	3
Macon	3
Macoupin	7
Madison	28
Marion	78
Massac	14
McLean	4
Monroe	17
Montgomery	5
Moultrie	2
Peoria	1
Perry	95
Piatt	2
Pope	8
Pulaski	39
Randolph	116
Richland	18
Sangamon	6
Saline	38
Schuyler	1
Shelby	8

I. WHERE FROM.		II. WHERE NOW.	
St. Clair	114	St Clair	108
Tazwell	1	Tazwell	
Union	129	Union	107
Vermillion	2	Vermillion	1
Wabash	32	Wabash	38
Washington	168	Washington	109
Wayne	22	Wayne	13
White	37	White	26
Whitesides	1	Whitesides	1
Williamson	117	Williamson	111
Alabama	2	Alabama	1
Arizona	1	Arizona	1
California		California	5
Colorado	1	Colorado	39
Connecticut		Connecticut	1
Dakota		Dakota	1
Florida	1	Florida	3
Idaho		Idaho	3
Indiana	7	Indiana	8
Iowa	1	Iowa	11
Kansas	5	Kansas	37
Kentucky	7	Kentucky	9
Louisiana	1	Louisina	1
Massachusetts		Massachusetts	1
Maine	1	Maine	1
Maryland	1	Maryland	1
Michigan	4	Michigan	3
Minnesota		Minnesota	6
Mississippi	1	Mississippi	
Missouri	19	Missouri	36
Nebraka		Nebraska	4
Nevada		Nevada	8
New Mexico		New Mexico	3
New York	3	New York	4
North Carolina	1	North Carolina	1
Ohio	2	Ohio	4
Oregon		Oregon	1
Pennsylvania	2	Pennsylvania	3
Tennessee	23	Tennessee	23
Texas	3	Texas	10
Washington, D. C.	1	Washington, D. C.	6
Wisconsin	3	Wisconsin	6
South America		South America	1
Unknown	29	Unknown	164
	2465		2465

The whole number can not be traced as to their present residence, but the above is correct to within a small degree of error. While it shows that the State of Illinois has been educating young people who have gone to other States, it must also be remembered that other States have, in their Normals, educated many more who have come to our State and are teaching or doing business here.

III. OCCUPATION OF FATHER.

Agents	4
Architects	2
Bakers	3
Bankers	6
Barbers	3
Blacksmiths	10
Book Keepers	2
Butchers	5
Carpenters	64
Cabinetmakers	4
Clergymen	78
Clerks	12
Civil Officers	27
Contractors	4
Coopers	2
Druggists	10
Editors	8
Engineers	12
Farmers	1405
Harnessmakers	4
Hotel Keepers	13
Jewelers	6
Laborers	46
Lawyers	64
Livery Stable Keepers	3
Lumbermen	24
Manufacturers	8
Masons	7
Mechanics	19
Merchants	265
Militrry Officer	1
Millers	27
Miners	8
Painters	9
Photographers	2
Physicians	120
Sea Captains	2
Ship Carpenters	2
Shoemakers	12
Surveyors	2
Tailors	3
Teachers	81
Tinsmiths	3
Tobacconist	1
Upholsterer	2
Unknown	9
	2465

IV. THEIR OWN OCCUPATION.

Agents	4
Bankers	4
Barbers	2
Booksellers	1
Cabinetmakers	2
Carpenters	7
Clergymen	8
Clerks	122
Dentists	2
Druggists	14
Editors	3
Engineers	2
Expressmen	2
Farmers	264
Harnessmaker	1
Hotel Keepers	2
Journalists	4
Livery Stable Keeper	1
Laborers	14
Lawyers	28
Merchants	25
Millers	21
Milliners	7
Miners	2
Painters	2
Printers	6
Physicians	21
Photographer	1
Students	621
Teachers	745
Telegraphers	13
Tailor	1
Superindents of Schools	7
United States Mail Service	5
Ladies at home	104
Married Ladies	262
Deceased	59
Unknown	76
	2465

It must not be assumed that all of the number 621 set down above as students are in our own school. Many of them are studying in professional and other schools. About 450 of them have been in our University during the year now closing. Nor is it certain that all of the 745 reporting themselves as teachers, actu-

ally taught last winter. That is their profession for the present time. Some of them failed to find a school at the proper time; few are in temporary ill health, and some were for the time engaged in other ways. Of the whole number who have entered, 1593 are known to have taught for a longer or a shorter time in our own State; and quite a portion of those who are set down as students—now studying law or medicine—have done duty as teachers, but are not so recorded on our present books.

REPORT OF DEPARTMENTS.

DEPARTMENT OF LATIN AND GREEK, AND REGISTRAR.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

DEAR SIR:—I have the pleasure of presenting herewith the following statement of classes and work in this department for the scholastic year 1884-85.

In the Fall Term the classes under my charge were as follows, viz.:

1. Greek Rudiments.
2. Latin Elements, Section A.
3. Anabasis and Greek Grammar.
4. Cæsar's Commentaries and Latin Grammar.
5. Virgil's Æneid.
6. Latin Elements, Section B.

During the Winter Term my classes were advanced to the following, viz.:

1. Greek Grammar and Reader.

2. Latin Grammar and Reader, Section A.
3. Memorabilia of Socrates.
4. Cæsar and Sallust and Latin Grammar.
5. Orations of Cicero.
6. Latin Grammar and Reader, Section B.

During the Third Term, and at this writing, the classes in this department are pursuing the following studies, viz.:

1. Xenophon's Anabasis and Greek Grammar.
2. Latin Reader and Grammar, Section A.
3. Homer's Iliad.
4. Sallust's Catiline and Latin Grammar.
5. Tacitus de Germania.
6. Latin Reader and Grammar, Section A.

It affords me pleasure to state that most of the students in my department have exhibited a commendable zeal and energy in their studies, and have made excellent progress. A few have been irregular and inattentive, and consequently will fail to carry their work.

Four members of the graduating class this year will honorably complete the full classical course; three members will alike finish the entire Latin course, and one other will complete one year of the Latin.

Added to my duties of the school and recitation room, I have performed the labors of the Registrar of the University. These, in addition to my other work, have been many, and often onerous. I have carefully enrolled the names of all students, giving date of entrance, county represented, etc.; have collected all tuition and incidental fees, and, on receipt, have transferred same to the Treasurer of the Institution; have placed on file all original bills; have prepared all vouchers in duplicate for current expenses; have issued money orders on the Treasurer for the payment of all bills of indebtedness, and have kept a faithful account of all amounts received and paid out, and have performed such other duties as pertain to the office of Registrar of the Institution.

It gives me pleasure, also, to state that, through a kind Providence, I have not been absent from duty a single hour during the scholastic year.

Respectfully submitted,

CHARLES W. JEROME.

DEPARTMENT OF MATHEMATICS AND TRAINING.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

DEAR SIR:—The following is a statement of my work in the school for the year 1884–85:

I have taught during the year twelve different classes—two in Geometry, one in Trigonometry and Surveying, two in Practical Pedagogy, one in School Law, two in Theoretical Pedagogy, and one each in Mental Philosophy, Logic and Ethics; also one class in Arithmetic from the Training department.

The work done by the classes has been that indicated by the syallabus of studies in the catalogue of our school for the current year, with but slight exception. The class in Geometry completed that branch about three weeks before the close of the Winter Term, and entered at once on the study of Trigonometry. This change gave fifteen weeks for Trigonometry and Surveying instead of the twelve allowed by the course of study, and proved quite helpful to the class.

All the classes are entitled to praise for faithful efforts and the good results reached. Since my connection with the school the per centage of pupils showing thorough interest in their studies has never been so large as in the year just closed.

The Training school work has, in most respects, been satisfactory. The attendance of pupils has never been larger before, so large indeed that with every possible effort to furnish accommodations, some had to be turned away. The enrollment by terms, and for the year, is shown in Miss Krysher's report, to which I ask your attention. The large attendance may be taken as evidence of approval by the public of the work done in this department of our school, and in this way it has been a source of gratification; but, our rooms being few and small, it has been a source of discomfort. Till larger rooms are secured for use of the Training school, I think the number of pupils received should not exceed fifty.

I am glad to be able to say that with two exceptions the pupil-teachers have shown a genuine interest in their work. They have made careful daily preparation for their duties as teachers, and

have accepted kindly and promptly such advice or direction as has been given them either by Miss Krysher or myself. In the year now closed forty-eight classes have been instructed by Normal pupils, and it is but right to say that, in methods of teaching and in management of classes, these young teachers have made decided progress. The Training department has proved, more positively than in previous years, that it is an important part of our Normal school.

Respectfully Submitted,
JOHN HULL.

DEPARTMENT OF PHYSICS, CHEMISTRY, GEOLOGY AND BOOK-KEEPING.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

DEAR SIR:—Herewith is submitted a summary of the above department during the school year 1884-85:

FIRST TERM.

CLASSES.	ENROLEED.	PASSED.
Natural Philosophy, B	27	23
Natural Philosophy, B	17	14
Chemistry, B—Two Sections	13	13
Spelling, C	50	

SECOND TERM.

Book-Keeping, Two Hours	33	23
Natural Philosophy, B	35	31
Chemistry, A—Two Sections	18	17
Spelling, C	40	

THIRD TERM.

CLASSES.	ENROLLED.	PASSED.
Book-Keeping—Two Hours	34	29
Natural Philosophy, A	36	28
Geology	10	10
Astronomy	10	10
Spelling	30	

It is needless to state that great inconvenience has been experienced on account of lack of room. But the same may be repeated that was stated in the last report, what we lacked in favorable surroundings has been made up in increased diligence and faithfulness on the part of the students. I desire especially to call attention to the need of a Physical Laboratory in connection with our work. It is most earnestly hoped that in drawing up the plans for the new building this matter will not be overlooked. It has been clearly proven that the proper method to read nature is in the langnage of experiment. The better institutions are making provisions for this demand, and ours should not rest satisfied with anything less than the most approved methods.

Possibly a Chemical and a Physical Laboratory could be combined in some way to lessen the expense. But it is earnestly hoped that some provision can be made for the work in physics as well as in chemistry.

Respectfully submitted,

D. B. PARKINSON.

DEPARTMENT OF ENGLISH LITERATURE, ELOCUTION, ETC.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

DEAR SIR:—Herewith I have the honor to transmit a report of the department of English Literature and Rhetoric, Elocution and Reading, and Vocal Music and Calisthenics for the year 1884-85. The number of classes organized and the enrollment in each class are shown in the following table:

FALL TERM.

CLASSES.	ENROLLED.	PASSED.
Rhetoric	13	12
Reading, A	24	19
Reading, B	40	28
Grammar, C	24	20

WINTER TERM.

English Literature	18	16
Elocution	13	12
Reading, A	10	6
Reading, B	18	15
Vocal Music	17	12

SPRING TERM.

English Literature	18	16
Elocution	13	12
Reading, A	16	12
Reading, B	24	19
Vocal Music	23	19

I think the work of the year may be said to have been unusually profitable. With a few exceptions the pupils have been diligent and earnest in their studies, and the progress made has been encouraging.

A marked improvement in the ability to read well orally is noticeable in the new students, and each year the schools of this section do better work. Much more time has been found for the discussion of methods of teaching than could be given to professional work in any preceding year.

During the Winter Term tri-weekly exercises in Calisthenics were conducted in Normal hall for the benefit of the young women, but for the other terms arrangements could not be made for such exercises. Instead of the time usually allowed to physical exercises, fifteen minutes was devoted to singing. All participated heartily in this delightful recreation, and the improved quality of the singing became very marked towards the close of the year.

During the last Summer vacation I was actively engaged for seven weeks as instructor in teachers' institutes. Three weeks were spent in Jasper County, three in Richland and one in Hardin. In addition I spent a day each in Jackson and Williamson

Counties. Since school opened I have been called to attend gatherings of teachers in Union and Pulaski Counties.

All of the institutes were largely attended, and I am sure that there has never been so high a degree of enthusiasm on the subject of school and teaching in Southern Illinois.

Thanking you for your wise oversight and helpful aid and counsel, I respectfully submit the above report.

JAS. H. BROWNLEE.

DEPARTMENT OF GRAMMAR.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

DEAR SIR:—I have the honor of submitting to you the following report of the work done in the department of Grammar during the eleventh year of the Institution. The First Term I taught as follows:

CLASSES.	ENROLLED.
Grammar, B—1st Division	25
Grammar, B—2nd Division	16
Grammar, C	45
Grammar, D	43
English Analysis	13
Term Total	142

The Second Term my classes were:

Grammar, B	30
Grammar, C—1st Division	37
Grammar, C—2nd Division	31
Grammar, D	33
Word Analysis	17
Term Total	148

The Third Term I taught as follows:

Grammar, A	29
Grammar, B—1st Division	22
Grammar, B—2nd Division	21
Grammar, C	39
Grammar, D	36
Term Total	147

During the year I have taught fifteen classes, containing a total of 437 pupils.

In addition to the above work a class in E Grammar was found necessary the First Term, which was taught by Professor Brownlee.

The majority of my pupils have exhibited an earnest, studious spirit, and their progress has been gratifying. By request of the members of the A Class, made at the close of the eight weeks given to methods, the class was continued to the close of the term, and given special work in the peculiar constructions which are so common in our language.

There is one change in my work which seems desirable. It is that a regular study of English Composition be required early in the course. This will aid our pupils in the more advanced studies, by giving them facility in expressing thought, and will also prove of lasting benefit when they themselves become teachers. I believe the change to be made in our course of study for the next year provides for this need.

The plastering rendered our room much more comfortable than on the previous year. It has, however, been well nigh impossible to keep the floor warm during the cold weather. This the pupils have endured cheerfully, hoping our State would afford us better quarters in the future.

Respectfully submitted,

MARTHA BUCK.

DEPARTMENT OF NATURAL HISTORY AND PHYSIOLOGY.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

DEAR SIR:—I have the honor to report the following as a summary of the work done in this department during the year 1884–5.

But little change has been made in the general plan of work save such as was necessary to conform with our circumstances in

the temporary building we have been occupying this year. One change that may be mentioned here is, that the want of room prevented much practical work in Botany and Zoology in the the school room, as was the custom in the old building; as a consequence such work when attempted at the homes or rooms of the pupils, lacked stimulus from the oversight of the teacher, and as would be natural, less was done, and that not so well done. In Botany very few attempts were made at pressing plants by the pupils, though about the same amount of work has been done in analyzing, both in the class and outside of the class as usual. In the drill work on the leaves and inflorescence that is always given at the beginning of the study I miss the fine herbarium I had access to before the fire. The microscope has been used freely when its use would aid the class in the better understanding of a lesson, not only in Botany, but in the other branches as well.

Our increasing museum is an aid to us in teaching Zoology this year over what it was last, and while we are crowded by having the material in the recitation room instead of by itself, it gives us one advantage, in that the specimens are always at hand when they are needed for illustration, and without doubt are used more freely than they would be if the specimens and recitation were separated by several long flights of stairs. Some practical work has been done in this study, such as taxidermy, preparing and studying insects, etc.; and a few of the students have aided me in labeling specimens.

The work in Physiology has been about the same that it was the Spring Term of last year.

During the Fall Term three classes were taught with results as follows:

Classes.	Number.	Left class.	Passed.
Botany, A	6		4
Zoology, B	15	2	13
Physiology, A	26	4	20

During the Winter Term I had two classes, one of which was in two sections, giving me three recitations, the results as follows:

Classes.	Number.	Left class.	Passed.
Zoology, A	35	2	33
Physiology, A	34	2	31

During the Spring Term just closing I have had four classes with the following results:

Classes.	Number.	Left class.	Passed.
Physiology, A	39	3	
Botany, A	29	2	
Botany, B	21		21
Zoology, A	32	2	

As during last Spring Term, I have had a few silk worms feeding in my rooms, to illustrate in a small way the branch of industry they represent, and to show the growth and transformations of Lepidopterous insects. They have been objects of interest to the class and to many not in the Zoology class. Part of the eggs saved last year were distributed to illustrate the same thing in the common schools. I am in hopes before another school term begins to have ready for use in the Zoology classes a manuel of the butterflies of the eastern United States which I have prepared during the last year. This will be another aid to the practical work in those classes.

Very Respectfully Submitted,

G. H. FRENCH.

DEPARTMENT OF HISTORY.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

Dear Sir:—I have the honor to submit the following report of the work done in my department during the year just closing:

FALL TERM.

Classes.	Enrolled.
History, U. S., C	57
History, U. S., B	27
History, U. S., A	24
General History	17

WINTER TERM.

Classes.	Enrolled.
History, C	28
History, B	55
History, A	14

SPRING TERM.

History, C	29
History, B	32
History, A	51
Constitution U. S	17

In addition to the class work indicated above, I have for two terms had charge, during one hour, of the Study Hall, and each term have given assistance in the Spelling.

In all of my classes the interest shown by the pupils has been encouraging, and their application and progress has been gratifying.

Realizing that the study of History is of great practical value in preparing our students to discharge the duties of citizenship intelligently, in the A and B Classes as much attention as the time would allow has been given to the study of the Constitution of our country.

Respectfully submitted,

ESTHER C. FINLEY.

DEPARTMENT OF ALGEBRA AND ARITHMETIC.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

Dear Sir:—I have the honor to submit the following report of my department for the year ending June 11, 1885:

The whole number of pupils enrolled in the department during the year is as follows, viz:

Number enrolled in Higher Algebra	22
Number enrolled in Arithmetic	379
Total number pupils enrolled	401

Below is an exhibit of the number of pupils in the different classes during the Fall, the Winter and the Spring Terms respectively, together with the number of pupils who made a passing grade:

FALL TERM.

Classes.	Enrolled.	Passed.
Algebra, C—One Class	19	15
Arithmetic, D—Two Classes	67	25
Arithmetic, C—Two Classes	70	37
Arithmetic, B—One Class	31	20

WINTER TERM.

Algebra, B—One Class	12	10
Arithmetic, D—One Class	35	16
Arithmetic, C—Two Classes	74	34
Arithmetic, B—One Class	41	25
Arithmetic, A—One Class	26	21

SPRING TERM.

Algebra, A—One Class	10	10
Arithmetic, D—One Class	29	
Arithmetic, C—One Class	44	25
Arithmetic, B—One Class	54	33
Arithmetic, A—One Class	27	19
Total Number	539	290

This shows that about seventy-two per cent. of the actual enrollment passed grade, but only about fifty-three per cent. of the class enrollment.

The classes have been under my immediate instruction during the entire school year, with the exception of one section of the C work in Arithmetic, which I placed in charge of Miss Esther C. Finley.

Particular emphasis has been given to practical business work in the class drills in Arithmetic. The classes have done very good work during the three terms.

The Algebra class sustained a high degree of excellence throughout the year.

The work of this department required the full six hours of instruction, in addition to many extra hours that seemed unavoidable to secure good results.

I had charge of the D section in Spelling during the school year.

The whole number of pupils enrolled in the D section of the Spelling was 130. The number passing to the C section was 54.

The following is a schedule of classes and hours of recitation in this department:

HOURS.	FALL TERM.	WINTER TERM.	SPRING TERM.
1	Arithmetic, D—Section 1.	Arithmetic, C—Section 1,	Arithmetic, B—Section 1.
2	Algebra, C.	Algebra, B.	Algebra, A.
3	Arithmetic, C—Section 1.	Arithmetic, C—Section 2.	Arithmetic, A.
4	Arithmetic, B.	Arithmetic, D.	Arithmetic, D.
5	Arithmetic, C—Section 2.	Arithmetic, B.	Arithmetic, C.
6	Arithmetic, D—Section 2.	Arithmetic, A.	Arithmetic, B—Section 2.

The classes in the D work are so very large, and the pupils in general so backward in a knowledge of the fundamental rules of Arithmetic, that it is next to impossible to obtain required results from them, especially during the short terms. Hence we are unable, except by special examination at the close of the Winter and Spring Terms, to pass very many to the C work.

While the year has been one of incessant labor to both pupils and teacher, it has also been one of pleasant associations, and I am inclined to believe of more profit to both than the work of last year.

Respectfully submitted,

SAM'L. M. INGLIS.

DEPARTMENT OF GEOGRAPHY AND ALGEBRA.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

DEAR SIR:—The following table gives the usual work in my department by terms for the school year:

HOURS.	FALL TERM.	WINTER TERM.	SPRING TERM.
1	Geography, A.	Geography, B.	Geography, A.
2	Geography, C.	Geography C.	Geography, B.
3	Geography, B.	Physical Geography.	Geography, C,
4		Geography, A.	
5	Algebra, E—1st Division.	Algebra, E.	Algebra, D.
6	Algebra, E—2d Division.	Algebra, D.	Algebra, E.

The membership of the classes in this department has been as follows:

FALL TERM.

CLASSES.	ENROLLED.
Geography, A	23
Geography, C	30
Geography, B	38
Algebra, E—1st and 2nd Divisions	38

WINTER TERM.

Geography, B	29
Geography, C	28
Physical Geography	23
Geography, A	19
Algebra, E	23
Algebra, D	19

SPRING TERM.

Geography, A	28
Geography, B	35
Geography, C	28
Algebra, D	16
Algebra, E	17
Total in classes	394

The greater part of the pupils in this department have been faithful and deserve praise.

Respectfully submitted,

INEZ I. GREEN.

TRAINING DEPARTMENT.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

DEAR SIR:—I am glad to submit the following report for the year 1884-5:

The pupils were promptly in places on September 8. By the aid of a written statement regarding the advancement of each

grade from my predecessor, Miss Mary A. Sowers, the pupils were soon classified and reciting regular lessons.

The enrollment number for the Fall Term was 64. The enrollment for the Winter Term was 54.

We could not possibly accommodate all the pupils who came the Spring Term, but accepted 64. The enrollment number for the year was 85.

The attendance has been remarkably good. Thirty-eight of these pupils have been in regular attendance the entire year and fifty-seven two terms of the year.

There are six grades of pupils in this department. Thirteen pupil teachers received instruction in methods of teaching and assisted in my work during the Fall Term, fourteen in the Winter Term and twenty in the Spring Term.

I taught a class every recitation hour during the Winter Term, both Fall and Spring Terms, every recitation hour save one.

Prof. Huil, aside from his other work, taught classes in this department.

All pupil teachers, with perhaps a single exception, who have taken hold of this work, have manifested a delight in it, and made fair improvement in management of class and methods of instruction. They are therefore more capable of taking charge of a school than they could have been without this practical experience.

The Training Department this year started a Museum. The pupils have given quite liberally of their curiosities, and some of the donations have been really helpful in the Object Lessons and Elementary Science.

The pupil teachers have had careful supervision in the work, but particular attention has been given to the proper mode of testing the child's knowledge. These teachers have been quite faithful in attending the weekly teachers' meeting.

It has been the aim in all recitation to give the pupil something to think about, and then to have him express his thoughts in an easy, elegant manner.

Respectfully submitted,

ALICE KRYSHER.

DEPARTMENT OF MODERN LANGUAGES.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

I have the honor to submit herewith to your kind consideration the report of the above department, for the scholastic year ending June 10, 1885:

The number of pupils has greatly increased during the past year from my last year's report, being about twice as large, viz:

Fall Term	54
Winter Term	52
Spring Term	58
Total	164

Against 86 last year.

This number includes 20 pupils from the Training Department. The number of daily recitations was six during the entire year. As to my method of teaching and its underlying principles, I most respectfully refer to my last year's report. As a mechanic produces the best work with those tools to which he is best accustomed, I did not make any change, either in method or text-books. It gives me indeed much pleasure to state that the conduct of my pupils in the class-room, with *very few* exceptions, was that of genuine ladies and gentlemen, and consequently I can say, that, generally speaking, the result is quite satisfactory.

THE ADVANCED FRENCH CLASS has finished Otto's French Grammar. It has read "Trois mois sous la neige" entire, and four books of "Les Aventures de Telemaque."

THE ADVANCED CLASS IN GERMAN has also finished the German Grammar. Has read and grammatically analyzed a great number in "Smith's Narrations," has written numerous compositions, letters, etc. The most advanced in the class are able to express their thoughts in German with a fair degree of ability, clearness and grammatical correctness.

THE INTERMEDIATE AND BEGINNERS' CLASSES have in every case reached that point, which they should have reached, according to the number of terms studied.

Respectfully submitted,

J. BENGEL.

DEPARTMENT OF PENMANSHIP AND DRAWING.

Robert Allyn, LL.D., Principal Southern Illinois Normal University:

The Normal Drawing Course embraces instruction in three branches of the art—Mechanical Perspective, Free-hand Perspective and Decorative Design—one term being required for each.

The Mechanical Perspective, which necesssarily includes a certain amount of geometric drawing, lays a firm foundation for the work which follows, enabling the student to understand why the same object appears differently when viewed from different standpoints, and to know how a given object should appear under given conditions of position and light. Thus his eye is trained to see correctly, and the knowledge gained acts as a kind of compass, rendering him far more independent of his teacher than he otherwise would be, and making him a surer guide to those who, in the future may be placed under his charge.

To a pupil thus equipped, the Free-hand Perspective seems less formidable. This work includes outline pencil drawings of wooden models arranged singly or in groups. Although so little is said of this department, it is the most important of the three. Mechanical Perspective is but a means to the end. Free-hand Perspective (all drawing from nature and from objects animate or inanimate) is the end.

Having but one term given us, we make a beginning only of the end. However, we intend that it shall be such a good beginning that the industrious student can, unaided, pursue his studies in this direction as far as his zeal will carry him. For those who are prepared and desire to enter them, there are more advanced courses in Decorative Design and in Charcoal and Crayon-sance.

The same drawback occurs in the Third Term—want of time. Forty-two hours are insignificant indeed beside the years which have been, and still are required to make first-class designers, We can give but a peep into the almost fathomless mysteries of that fascinating employment. But one can see much in a well directed peep; much to lay up in the mind for after study, much for present thought. Our object is to give the student practical ideas which can be used afterwards; in fact, to put solid meat into our nut-shell.

The First Term there were two drawing classes and thirty-one pupils. The Second Term brought twenty-three in two classes, and the Third Term, twenty-one in the same number of classes; each student as he entered, any one term, being required to take the course in regular orders.

To give a legible, graceful and rapid hand in a short time, is our aim in the Writing Department. That this may be accomplished, all unnecessary rules are dispensed with. The attention is directed rather to comparative heights and distances, and to differences in direction and curves. The forearm muscle is freely used, the fingers being slightly employed in forming the small letters, and the whole arm, to some extent, is combined with the muscular movement.

There have been three classes, the entire school year, including 102 the First Term, 104 the Second, and the Third Term 74.

Teaching exercises in which for twenty or thirty minutes the students were instructed by one from their own number, occurred at regular intervals in all the classes.

One hour each day has been devoted also to a class of about twenty-four in the "Training Department." The pupil teachers who have assisted at this hour, at different times during the year, are Mamie H. Gillham, drawing; Flora North, Louise Hutchmacher and Lavina Levan, writing.

LILIAN B. FORDE.

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Annual Report

—OF THE—

Principal and Professors

—OF THE—

Southern Illinois Normal University,

Carbondale, Ill.

—MADE TO THE—

Board of Trustees,

June 11, 1886.

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ANNUAL REPORT

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ANNUAL REPORT

—OF THE—

SOUTHERN ILLINOIS NORMAL UNIVERSITY.

To the Trustees of the Southern Illinois Normal University:

GENTLEMEN:—I have the honor to submit the Twelfth Annual Reports of the Principal and Faculty of the University under your care. The year has been a prosperous one, in many respects exceeding any year in the history of the school. The health of the members of the Faculty has been good, and our gratitude is due to the Giver of all Mercies for this and for the general health of the students. Two of these have died during the year—Miss Alice Horner, of Pinckneyville, and Mr. John W. Robinson, of Pomona.

The number of students has increased slightly, as will be seen by our catalogue, there being of different students 486 as against 465 last year. By terms the numbers are as follows: Fall Term, 315; Winter Term, 318; Spring Term, 354, making a total of 987. The last year the total was 927.

We have been compelled to continue in the temporary building. It has been greatly crowded with our numbers, but has had its advantages, there being no stairs or long corridors, and all the rooms being very convenient to the Study Hall. It was much improved during the summer vacation by underpinning and whitening the walls and ceilings and by arrangements for better ventilation. It has been comfortable, and the work of the school has been well done in it. We shall always

gratefully remember the enterprise and liberality of the citizens of Carbondale which provided it for us.

There have entered for the first time during the year two hundred and five students, carrying the total enrollment up to 2,670. More of this number have come to us with Second Grade Certificates, and consequently they have gone directly into the Normal Department. They have only taken time for the reviews of the Preparatory branches. This has raised the standard of attainments when the students enter a very little. The average age of entering has also increased by almost two months; having been in the past years almost exactly eighteen years and six months, it is now about eighteen years and eight months. This average of course includes the Training Department pupils, one of whom is the youngest to enter in our history, being a few weeks under six years.

It was said that the standard of scholarship among our students who enter is gradually rising and approaching the ideal of a Normal School of high character. We have always found it necessary to do a large amount of elementary work, because the country ungraded schools, and the village schools as well, do give to their pupils too little drill in both the elements and in the intermediate work. We have taken students of almost all grades and have assigned them to classes often in the very rudiments—even the primary classes—because we could not conscientiously advance them to higher grades. The schools of Southern Illinois have lately made such improvements, and are now in such condition, that we think we may safely take an advance step in this direction of requirements for admission to our school, and allow few if any to enter the Normal Department who are not properly qualified for a Second Grade Certificate.

To advance our standard thus will require the action of the Board of Trustees, and we are prepared to recommend it, and to urge it for many reasons, among which are the following:

First, as we have been doing—and we think circumstances

justified us—large numbers of immature scholars have entered the school, and have thus necessarily depressed the scholarship and the aspirations of those who desire to be teachers. Again, these scholars so unprepared for advanced work—more especially those from Carbondale—are obliged to spend much more time in study than the original act establishing the University contemplated. While no time of continuance in the school was fixed, it clearly was not supposed that a young person would spend six or ten years in school in order to go over a course of three or four years. But that may happen. As for an example, a student may enter, giving a pledge to teach, and by reason of being far behind in attainments, or in consequence of being compelled to aid, as a boy on a farm or in a store, or a girl in housework or in practicing at her music, may do each term less than half school work, and thus protract the period of graduation, on account of other work and irregularities, to more than twice the time needed by a diligent student who gives his whole time to his studies. This puts upon the teachers double duty in the case of many, and produces a depressing effect on all. This brings among us many students who lack purpose and who set such bad examples of half idleness as damages greatly. These students prevent the advancement of others, and nearly wear out the bonds of a wholesome discipline by a constant chaffing and begging for indulgences, almost impossible to resist, or which could only be successfully resisted by a graven image deaf to all the voices of blandishment and entreaty. Add to these hindrances—convenient for the family, as we might say—social entertainments, church festivals and charitable attempts to relieve poverty, in which the young people are apparently needed, and in which it must be acknowledged that students are always expert, it will be seen that we are compelled to do almost a double amount of teaching to bring such students to graduation. The students who live in Carbondale do require vastly more of us than those who come from abroad, and who devote themselves, as all should do,

wholly to school duties. Thus a student, as has grown to be a custom, by entering and giving a pledge to teach at the earliest possible moment allowed by a very liberal interpretation of the law—"sixteen years old for a girl, seventeen for a boy next birthday"—it is possible to protract study up to near twenty-five, and thus absorb the time of the professors and use all our facilities at least twice as long as the pledge which the statute prescribes—"three years." The usage should be such that there should be no chance for such an abuse of privileges, or for such a tax on the teachers' patience or the State's generosity. Every one who enters should make a pledge to complete the course within a given number of terms. These terms need not necessarily be consecutive, for it is often convenient for a student to teach school in alternate intervals of attending the University. Many now do so. Hence the unit of attendance might be the term, and not the year. We suggest that the pledge be slightly changed so as to include this point as well as diligent devotion to study and obedience to rules. Let it be as follows:

> In return for FREE TUITION granted me by the State of Illinois, in the Southern Illinois Normal University, which shall not be more than fifteen or eighteen terms, I do hereby pledge myself, after my course of study shall have been completed, to teach in the public schools of the State, if a situation can be found with reasonable inquiry, according to the law, at least three years, and as long as I shall receive free tuition. And if I do not teach, I agree to pay to the Treasurer of the University the sum which would have been charged for each term I shall have been in the school.

The other pledge which ought to be exacted of every person entering the school may remain as now, or with a very slight variation, viz.:

> I hereby pledge myself on my honor that I will conform to the rules and regulations made by the Trustees and Faculty, to be diligent in all my studies, and to avoid, while I am connected with the University, the use of tobacco and all alcoholic liquors.

Each one who enters should be required to bring a certificate

of character, and an appointment or recommendation from a County Superintendent as the law prescribes.

The organic act establishing the University, approved April 9, 1869, which is herewith enclosed, is quite particular in prescribing the method by which students shall be appointed to the school. In fact, the details are so numerous, and in some cases would be an intolerable burden on the County Superintendents or County Judges, or a Board of Supervisors, and as there is no provision other than a very doubtful one to pay these authorities for their services, and as it has been found such a tax on the time of persons who wish to send their children to our school to comply with these requirements, that they have gradually been allowed to fall into disuse. Indeed, from the first, when we sent questions for examinations of candidates and blank forms to be filled, hardly a half dozen conformed to the letter of the law.

We recommend that a scholar wishing to enter the school be required to sign the above pledges before a County Superintendent, and that he or she submit to an examination, paying, as the law demands for certificates for license to teach, one dollar, to be for the use of the County Institute fund, and that when the scholar presents it to the Registrar for enrollment, the Registrar shall deduct from the fee for incidentals which the law prescribes, the sum of one dollar. The student then will pay no more than now, and the county sending a student to the University will increase its institute fund by the amount of the one dollar.

Then again there should be some restriction on the number of students from any particular county. The law as originally passed allows to every county in the state two scholars, and to every representative district as many as it has representatives. It is presumable that the word "representatives" here is intended to include senators, as they represent the people as certainly as do the representatives technically so named. This interpretation would allow 204 for the 102 counties and four

for each of the fifty-one districts, or 204 more—408 in all. If it is intended only for the technical representatives so called, the numbers will be 357. Yet the law originally enacted declared that the building should be made to accommodate not more than 300 pupils.

The fee for tuition when the student gives no pledge to teach has varied considerably since the opening of the school. The law provides or rather pledges the State to pay for salaries, Trustees' expenses, apparatus, fuel and repairs, and enacts that "all other expenses shall be paid by the students." The fee for this is fixed at $7 per year, and the sum has almost exactly met the expenses of stationery for the school, an assistant to the janitor, the cost of the Training Department, and certain indefinable items on which nobody can calculate beforehand. This fee is therefore regarded as just according to the law, and it is moderate so far as the pupil receiving free tuition is concerned. He enjoys an excellent building and teachers among the best in the State, and advantages almost beyond calculable value for about seventy-five cents a month for nine months a year.

But the tuition charged to one who does not wish to give a pledge to teach is by considerable less than was at first fixed by the Trustees, and less than in other schools of a similar sort, and has caused much jealousy on the part of private, or parochial or ecclesiastical schools in the State. Our small fees for tuition—$21 a year is the highest—almost tempts immature and sometimes careless ones to enter, and, paying so little, they do not value what they do receive. The fee as we enter the new building should at least be restored to what it was at first, $30 for the Normal, $20 for the Preparatory, $13 for the Grammar, and $10 for the Training Department. This is about the usual fee charged in the kind of schools named, and it would remove one serious complaint, that the State sets up cheaper—in the sense of good schools at a low price—schools than theirs can be, and so comes into competition with them.

and almost destroys them. We can not receive all who would come to us and make some good claim that we shall educate them. We could divide more readily and equitably with our neighboring schools if the fees in our school were put up to the figures above named. After raising our tuition fees, if people insist on sending their children to us and paying a reasonable fee for their education, we could not complain, but on the contrary, we should see students concerned chiefly to find the best school.

We know that many still insist that the young men who come here and receive a gratuitous education do not go out and teach after graduation as they had pledged themselves to do. Most of them do amply fulfill their pledges. This point need be no further pressed here. We do give to the State and to its country schools more terms of teaching, year by year, than our pupils, including the Training Department, get from us.

During the year the Course of Study has been materially changed, having been reduced from three and four years respectively, to two and three years for the Short and Full Courses. It has caused some extra labor on the part of teachers to adjust classes for those who are to graduate this year, but it is hoped that hereafter it will work more harmoniously, and that our number of graduates will be larger. Indeed, the promise of the class for next year is nearly double the average of our classes. It is confidently believed that they will not be less prepared for the specific work of the schools in Southern Illinois. A change has also been made in the program of studies so as to give each recitation a full hour by the clock, instead of the forty-five minutes, as has been the case till now. This will enable the faculty to insist strongly on their good rule prescribing only four studies for each scholar, and obliging each one to carry at least three daily recitations.

We have thought that the time of opening our new building would be a favorable opportunity for some of these changes. The State offers magnificent accommodations to its young men

and women; it gives them an excellent Faculty of instruction and government, or at least it proposes to furnish such, and if the present ones are not the proper persons they should be displaced. The youth who avail themselves of these privileges should be held to the strictest account to observe all their pledges of obedience to rules, to diligence in study and to subsequent service to the State. And the University should not be allowed to be crowded with the indifferent, who drag out their education over a half dozen years because it can be had conveniently and cheaply at home, and who will in consequence of this half idleness depreciate their advantages and lower the tone of morality and depress the standard of scholarship. We therefore urge these two points, the raising of the price of tuition and the kindred one of making admissions depend on certificates from County Superintendents with some apparent persistence, because we think them matters of simple justice to ourselves and to all concerned, and because we think it will relieve our school of some objections to it and to the State's patronage of Normal Schools.

For the last year we have insisted that every student who receives gratuitous instruction should enter some one of our classes in Pedagogy, and we think that in many ways we have seen good fruits of this practice. It has given these a better idea of their responsibilities and has awakened a greater interest in our school work, especially in the duty of self-control. In the fall the Principal gave three lectures a week and organized all such students into "observation classes," which produced a very marked result on the order of the scholars as they moved in and out from their recitation rooms.

The new building now approaching completion promises to be a model of its sort. It will have a capacity for 500 students in all its departments. We trust that very soon it will be filled to the utmost. Its magnificent Study Hall can seat 408 Normal students, as sent to us by Superintendents of the Counties of Southern Illinois. The Grammar Grade will be capable of

accommodating about 80 and the Primary about 60. Both of these will constitute our Training Department, in which we shall have opportunity to show a model of a good graded school. The Trustees ought to have the means from the State to admit gratuitously as many as 20 or 25 more, who shall be in the lower grade or Kindergarten.

Every room in the building will be fitted with the best appliances of furniture and apparatus. There will be ample corridors, and the light in these will be abundant. The ventilation and means for supplying fresh air will be ample and as nearly perfect as is possible.

Southern Illinois is to be congratulated on having the place of the former building filled by the present one. The liberality of the late General Assembly proved its wisdom also, and has given friend and foe of our public schools, and of seminaries for training teachers, to understand that the policy of the State is that all its citizens shall not only have equal rights in a common education, but that the schools of the people shall have, in a greater or in a less degree, the advantages of teachers who are trained under the best teachers and according to the best methods. When the Trustees last met in their annual meeting we were fearful lest the bill making an appropriation for rebuilding might fail to become a law. All doubts were, however, soon dispelled, and the act passed before the end of a month after our last Commencement. The State emphatically declared that it would do all its duty by its ungraded schools. From such schools most of our students come to us, and to such schools the most of them return, after a time of preparation for their work, to elevate these foundation stones of all our intelligence. For, let it be remembered, that if common schools shall raise the standard of scholarship to which their scholars are made to aspire, all else will rise with the schools. And while this is a fact, we find likewise that your graduates and students are gradually winning the confidence and respect of the school authorities of this part of the State. They are successfully filling

the best positions in the schools, as teachers, as Principals and Superintendents, and are spreading the knowledge of methods and the enthusiasm for science all over the land.

As we enter the new building we shall be prepared with a Museum and a Library both of considerable size and great value. The Museum, it will be remembered, was almost a total ruin by the fire. The Library was—the most of it—saved, and is in good condition to be used so soon as it can be arranged in its new quarters. Prof. French has been active in behalf of the Museum. He saved some specimens from the fire, and has now something more than two hundred different birds already mounted, which can be put into the new Museum so soon as it is prepared.

Professor Parkinson has collected a large number of minerals, particularly from Arizona and from Colorado. He has not been quite as much at leisure for the work of Mineralogy and Geology, but what time he has had on his hands has been well improved, and his department will make a creditable appearance so soon as the new rooms shall have been opened.

The Library has been considerably increased during the year—not largely by purchase, however. The Department of the Interior at Washington, through the Assistant Secretary, Hon. I. T. Muldrow, has completed for us a set of the Congressional Globe and Record. We were able to give him seventy-six volumes, duplicates of this set of books, and received in exchange about forty-eight. He proposes to aid us in completing several other sets of the publications of Congress and of the Smithsonian Institution.

Our Senators, General John A. Logan and Hon. Shelby M. Cullom, and Hon. John R. Thomas have contributed a large number of volumes and many maps of great value. Many works on Pedagogy have been collected and added to the Library, so that we are in a situation to begin with excellent facilities for improving the condition of education in our section of the State.

The several teachers have been able to attend to their duties with their usual success and popularity. The resignation of Prof. Brownlee, which took place at the close of the Fall Term, has thrown more work on the Principal for the last two terms. Professor Inglis assumed a part of the work, but has continued in charge of his former Department—Mathematics—which he now resigns.

In the Spring Term Miss Mary Wright, a graduate of 1876, was employed to assist in Reading and Arithmetic. She has done good work, and if she could be made a permanent assistant it would be an acquisition to the school greatly needed.

The Department of Drawing has been very greatly improved under charge of Miss Salter, who has carried forward the more systematic work begun last year in a manner creditable to her uncommon talent for this work.

To mention the other professors by name is unnecessary. Their work and their characters are too well known to need any praise. Justice demands that it should be said of them, they are faithful, and have spared no labor or sacrifice to make the work of their departments a success. To name indviduals is unnecessary, and would be invidious. When all have done their duty well, the best of praise is to say no more than this.

The Military Department has continued under First Lieutenant Starr, and has been ably conducted. Little could be done compared with what might have been done if we had had good accommodations. He is ordered to his regiment at the close of his three years, which is the limit to the time of assignment; and Second Lieutenant James F. Bell is detailed to fill the position for the next three years. It would be a great benefit to this school, we think, if every young man over 15 years of age were in the Cadet Corps, and could be drilled three times a week in the excellent system practiced. We can only urge every student to enter the corps and gain a little knowledge of the military discipline, which may be of great value to every citizen.

The Faculty have the satisfaction of recommending the following young ladies and young gentlemen as suitable persons to receive Diplomas. They have completed the several studies prescribed in your By-Laws as the Short and Full Course, and by their good conduct and diligent attention to duty merit this honor, viz.:

Full Course—Sarah A. Allen, Jefferson Co.; Florence M. Barber, Perry Co.; Adella Brown, Perry Co.; Minnie J. Fryar, Union Co.; Kittie I. Hord, Jackson Co.; Margaret Kennedy, Williamson Co.; Carrie I. Loomis, Jackson Co.; Louella Nichols, Clinton Co.; Fannie D. McAnally, Jackson Co.; Alexander H. Fulton, Marion Co.

Short Course—Cora Williams, Jackson Co.; Luther T. Scott, Sangamon Co.

Full Course and Greek—Luella Hundley, Williamson Co.

Full Course, Greek and French—Edgar L. Storment, Marion Co.

We recommend that the Principal be instructed to confer the usual Diplomas on the above persons on Commencement Day.

The Principal improves this occasion to tender his thanks to the members of the Faculty for their courtesy and assistance in his multifarious labors, and to the Trustees for their consideration. He wishes again in conclusion to congratulate them and the public on the prospect of a building soon to be completed and occupied which will provide ample accommodations for our noble school. I am, gentlemen, very respectfully,

Your obedient servant,

ROB'T. ALLYN, Principal.

REPORTS OF DEPARTMENTS.

DEPARTMENT OF LATIN, AND REGISTRAR.

Robert Allyn, LL.D., Principal:

Dear Sir:—I herewith transmit a statement of classes and work performed in this department for the scholastic year 1885–86:

In the Fall Term the classes under my charge were as follows, viz.:

1. First Year Latin, Section A.
2. Cæsar's Commentaries and Grammar.
3. Orations of Cicero and Grammar.
4. First Year Latin; Section B.

During the Winter Term my classes were the following, viz.:

1. First Year Latin, Section A Continued.
2. Cæsar and Grammar Continued.
3. Virgil's Æneid.
4. First Year Latin, Section B Continued.

During the Spring Term my classes pursued the following studies, viz.:

1. Latin Grammar and Reader, Section A.
2. Cicero in Catilinam.
3. Tacitus de Germania.
4. English Grammar, Section C.
5. Latin Grammar and Reader, Section B.

I am glad to say that most of the students in this depart-

ment have shown a zeal and earnestness in their studies which have insured success in their work. Some, having too many studies, and others, owing to inattention and irregularity in attendance, have not accomplished so much, and possibly will not carry their work.

During all the year I have had charge of the Normal Hall one hour, and a part of the time two hours, each day.

I have also, during the Winter and Spring Terms, had charge of Section B, in Orthography; and during all the year, with the assistance of students detailed for that purpose, I have daily corrected and graded the spelling work of Sections B, C and D.

In addition to the above duties, I have performed the labors of the Registrar of the University. I have each term carefully enrolled the names of all students, giving date of entrance, County represented, etc. I have collected from tuition and incidental fees, and other sources, the following amounts, viz.:

Fall Term,	$1,234 00	
Winter Term,	857 20	
Spring Term,	955 00	$3,046 20

On receipt I have transferred to the Treasurer of the institution as follows, viz.:

1885	September 7,	$780 00	
"	" 9,	164 00	
"	" 17,	134 00	
"	" 25,	62 00	
"	October 23,	68 00	
"	November 29,	25 00	
"	December 15,	1 00	$1,234 00
1886	January 4,	$564 00	
"	" 5,	184 00	
"	" 23,	72 00	
"	February 19,	37 20	$857 20

1886	March 22,	$561 00	
"	" 27,	223 00	
"	April 2,	59 00	
"	May 8,	39 00	
"	June 26,	73 00—	$955 00
	Total,		$3,046 20

I have placed on file all original bills; have prepared all vouchers in duplicate for current expenses; have issued money orders on the Treasurer for the payment of all bills of indebtedness, as follows, viz.:

Trustees' expenses,	$510 05
Salaries,	19,201 67
Repairs,	112 83
Fuel,	712 62
Incidentals,	3,073 44
Library,	292 06
Apparatus,	28 08
Museum,	232 03
Care of Grounds,	109 47
Total,	$24,272 25

I have also kept a faithful record of all amounts received and paid out, and I have performed such other duties as pertain to the office of the Registrar of the institution.

Respectfully submitted,

CHARLES W. JEROME.

DEPARTMENTS OF PSYCHOLOGY AND PEDAGOGY.

Robert Allyn, LL.D., Principal:

DEAR SIR:—The following is a statement of my work in the school for the year ending June 30, 1886. This work has been of two distinct kinds: 1, Teaching; and 2, Superintending.

1. The regular classes taught by me are the following:

FALL TERM.	WINTER TERM.	SPRING TERM.
Pedagogy D,	Pedagogy C,	Pedagogy C,
Pedagogy B,	Pedagogy A,	{ Ethics,
Geometry B,	Geometry A,	{ School Law,
Pedagogy D,	Psychology B,	Psychology A,
		Pedagogy D.

In the Fall Term the Pedagogy D had so large a membership as to require a division of the class into two sections; and Class C, in the same study, was divided for the same reason, and one section placed in the Winter Term and one in the Spring, that I might have better opportunity to supervise the observation work of its members, in the Training School.

A class in Pedagogy D was organized for the Spring Term, mainly for the accommodation of teachers who had entered school for that term.

The classes in Geometry, Ethics, and School Law have done substantially the work of former classes in those branches, and the same may be said of those in Pedagogy, except that the lower classes have had less of study of text-book and more of observation of the teaching and management of classes in the Training School.

By the changes in the Courses of Study, made at the beginning of the year, Logic was dropped from the list of required

studies and a second term of Psychology substituted for it. This made it possible to put into the hands of the class in that branch a text-book better adapted to our needs than the one previously used, and to add to the interest felt in the study of Mind. The class was large, too large for the greatest profit, but the results were excellent beyond expectation.

The changes in the Courses of Study, with other causes, added much to the amount of teaching usually required for the classes in the branches named above. This additional work was for members of the Senior Class, and was necessary to fit them for graduation. The additional classes were six in number: Geometry, three; Pedagogy, two, and Mental Science, one.

In all the classes under my charge a good degree of interest was manifested, and the results reached were quite satisfactory.

2. The Training School has been full beyond our power to give proper accommodations, each term of the year. In rooms large enough to accommodate about 50 pupils there has been an average membership of 62. The enrollment by terms and other matters are given in Miss Krysher's report, submitted herewith, to which I ask your attention.

In the Training Department the methods followed and the ends reached have been much the same as those of last year. The pupil teachers, with a single exception, have done their work cheerfully, and are entitled to commendation for their earnestness and success.

Respectfully submitted,

JOHN HULL.

DEPARTMENT OF PHYSICS AND CHEMISTRY.

Robert Allyn, LL.D., Principal:

DEAR SIR:—The following brief summary of the above department for the school year just closing is hereby presented:

FIRST TERM.

CLASSES.	ENROLLED.	PASSED.
Physics, B	25	25
Physics, A	33	29
Chemistry	15	13

SECOND TERM.

Astronomy	18	18
Physics, B	23	20
Book-Keeping—Two Hours	37	28

THIRD TERM.

Geology	13	13
Physics, A	42	38
Book-Keeping—Two Hours	37	32
Algebra, E	15	12

In addition to the duties indicated by the above summary, mention may justly be made of the labors in connection with keeping and recording the record of attendance and deportment for the entire school except the Training Department. Also the charge of the Normal Hall one hour each day for the entire year, and for about one-half the year two hours each day. One section of the Spelling has remained in my charge, except the matter of corrections.

The character of the work attempted in the department differs but little from that of last year, save lessening the time allotted to Chemistry, the results of which I fear have not been satisfactory. The sciences of Physics and Chemistry are grow-

ing so rapidly in their scope and general interest that the time formerly given to them in a curriculum of study is at the present time by far too limited.

While it seemed best under the existing circumstances to shorten our courses of study, and I cheerfully consented that my department should share in the sacrifice, I regret that such a measure was the only remedy.

The class in Astronomy did excellent work, and improved many favorable opportunities to study the constellations, and use the telescope in observing the planets, their satellites, the moon, nebulæ, etc.

The class in Geology was not so fortunate in visiting so many fields of study as the class of the previous year. However, a number of the class availed themselves of the privileges of the annual picnic, and spent several hours studying the geological formations of "Grand Tower" and "Fountain Bluff," two of the most profitable points for the geologist to visit within the bounds of the State.

I desire to call attention to the mistake made by a large number of our students in undertaking the Science of Accounts before they are capable to easily comprehend the relations in business transactions. Many seem to have the idea that Book-Keeping is largely clerical in its character, and any one able to write a legible hand is fitted to be an accountant. I recommend more stringent requirements relating to the preparation for the above work.

Again allow me to express my gratitude and high appreciation of your counsel so cheerfully given, and which has added very materially to the degree of success attained in the department.

Respectfully submitted,

D. B. PARKINSON.

DEPARTMENT OF GRAMMAR.

Robert Allyn, LL.D., Principal:

DEAR SIR:—I have the honor of reporting the following summary of work done in my department during the year ending June 10, 1886. The enrollment by terms and classes was as follows:

FALL TERM:

CLASSES.	ENROLLED.
Grammar, A, and Composition	16
Grammar, B—1st Division	27
Grammar, B—2d Division	28
Grammar, C—1st Division	27
Grammar, C—3d Division	25
Grammar, D	35

WINTER TERM.

Grammar, B—1st Division	29
Grammar, B—2d Division	21
Grammar, C—1st Division	40
Grammar, C—2d Division	38
Grammar, D	30

SPRING TERM.

English Analysis and Composition	24
Grammar, B—1st Division	36
Grammar, B—2d Division	26
Grammar, C	56
Grammar, D	35

The foregoing shows a total of 488 pupils in this department for the year. On account of the change in the Course of Study last Spring, considerable conflict in recitations occurred. This

made it necessary for me to have an extra class in Grammar the Third Term, which is not shown in the above table of regular classes.

Of the 56 members in the C Class, the Spring Term, Prof. Jerome took 19 at the close of the second week, leaving my class 37 in number. The smallness of the room, and the scarcity of blackboard accommodations, render it difficult to interest a larger number at one time.

The work of the year has gone forward with interest, and the students have shown a general desire to improve their time. Especial interest was manifested by the older pupils in the Composition, which was added to my A work by last year's Catalogue. Some of them have reached a high degree of excellence in writing.

As usual, I have received a great many letters from various parts of the State, asking my opinion concerning different constructions. These questions I have given to my advanced classes for discussion, and much interest has thereby been awakened. They realize the value of class opportunities, when called upon to consider sentences found difficult by teachers already in the work.

Although we have for twelve years made an especial point of the correct use of language, much yet remains to be done. Seeing the power of early habit, I feel the need of impressing upon primary teachers the duty of using good English. The little pamphlet issued this Spring, "A Manual for the Use of Students in the Southern Illinois Normal University," will prove a great aid in this important part of my work.

Respectfully submitted,

MARTHA BUCK.

DEPARTMENT OF NATURAL HISTORY AND PHYSIOLOGY.

Robert, Allyn, LL.D., Principal:

Dear Sir:—I have the honor to report the following as a summary of the work done in this department during the year 1885-6.

Circumstances being the same as they were last year as regards work in the temporary building, the plan of work followed has been essentially the same. Want of room this year has prevented much of that practical work which is essential in the study of Natural History; but notwithstanding these difficulties a considerable amount of work has been done in all the classes, both during the recitation hour and out of it. This has been especially the case in the classes in Zoology, as our increasing collections would give us more materials for such work. Besides the regular work in the classes and out of them, consisting in examining and analyzing specimens, a greater number of students than is usual have spent some extra time in taxidermal work. Without going further into details, I may say that I find a growing interest in the study of Natural History among our young people.

In the regular course of study provision has been made for one term in Physiology, but the recitation program was arranged for this and a class each of the other two terms as well. In accordance with their program the study was taught three terms, each class being large, as the following summary will show. The Fall Term they were:

Classes.	No.	Left Class.	Passed.
Physiology, A	39	6	31
Zoology, B	16		14

The class in B Zoology was the Grammar Grade from the

Training Department instead of older preparatory pupils, as it has been heretofore. During the Winter Term I had classes with results as follows:

Classes.	No.	Left Class.	Passed.
Physiology, A	30	5	24
Zoology, A	27	2	24

During the Spring Term four classes were taught, as follows:

Classes.	No.	Left Class.	Passed.
Botany, A	64	5	
Botany, B	27	2	
Zoology, A	32	5	
Physiology, A	46	5	

At the time of writing this the term had not closed, hence the numbers that passed are not given.

The time not devoted to class work has been spent in the Museum, which will be reported elsewhere. There was no Summer or August session, but two weeks were spent in aiding in County Institutes, one at Murphysboro and the other at Metropolis. The rest of my time during the Summer was spent in making collections for the Museum. In taxidermy work I find the directions published in the Museum report last year of great benefit, the pupils doing the work better and relieving me from giving them so much personal oversight.

REPORT OF THE CURATOR OF THE MUSEUM.

Robert Allyn, LL.D., Principal:

Dear Sir:—I would respectfully submit the following as my report upon the work done in this department for the year 1885–6:

This year no attempt was made at obtaining aid from students in labeling specimens, for the reason that the work has

been of such a character that they could render but little assistance. As usual, work done will be reported under heads.

ARCHEOLOGY.

A very few much injured specimens were obtained from the ruins of the old museum at the time of the removal of the debris. Beside these, a brass arrow head from a field near Carbondale, and a few Indian arrow heads and other other implements have been added to our collection as reported last year.

MINERALS AND FOSSILS.

Nearly all of the new material in this division has been turned over to Prof. Parkinson. If we are to mention anything it would be a fine specimen of petrified wood and a mammoth tooth, both from Texas. When we get into the new building I expect to make special effort to increase the material in this division, as well as arrange and classify it.

BIRDS, ETC.

According to the report made last year, there were at the beginning of the year 182 specimens of taxidermy work in this collection, as follows: Mammals, 16; birds, 164; reptiles, 1; fishes, 1. During the year just drawing to a close 150 specimens have been mounted, representing, mammals, 10; birds,140. Besides these one bird was mounted by a student, and one mounted fish was obtained from Mr. T. Keyworth, of Marissa, by exchange. This gives us now, mammals, 26; birds, 305; reptiles, 1; fishes, 2; total, 334.

BOTANY.

But little work has been done in this division this year; a few seeds collected and a few rare plants pressed make up the total. It is my intention next year to begin work again on an herbarium.

CONCHOLOGY.

A few shells have been added to our collection, but nothing extensive has been done. Arrangements have been made for

identifying those of our fresh water shells not already named.

INSECTS.

Quite a large quantity of these were collected during the summer of 1885, some of which have been used in exchange, the balance being still on hand. I desire to use a share of these and those collected this year to exchange for minerals and fossils, and perhaps other specimens. All our named Coleoptera have been arranged in the drawers of the old cabinet, the number of species being increased a little over what was reported last year. But little permanent work can be done here till a new cabinet is made in which the specimens can be regularly arranged.

ALCOHOL SPECIMENS, ETC.

A few things have been added to our collection of this division during the year, somewhat crowding our shelves. Among these are some horned toads, so called, from Texas, and a fine rattlesnake. A few birds' eggs were added by donation to our small collection of eggs, making a nucleus for a collection of this group.

DONATIONS.

As heretofore, I give below a list of parties who have made donations to the museum during the year, and the articles donated. As the minerals and fossils have been turned over to Prof. Parkinson, it is probable that but few names appear here of those who have thus aided us in building up our museum, and if any are omitted the omission is not intentional:

E. S. Fakes, Indian hatchet.
S. T. Brush, snake skin.
E. Wooten, white heron.
Judge Harker, royal walnut larva.
Mr. Neff, royal walnut larva.
Mrs. M. Thompson, brown bat.
E. H. French, striped gopher.
Wm. Rous, luna moth.

Frank Woodward, humming bird.

E. A. Reeves, Makanda, two male crickets.

John H. Barton, minerals and ores and a large beetle, from Colorado.

Miss Ruby Kimmel, royal walnut larva.

Wm. Bryan, royal walnut larva.

Hubbard Alexander, pelican.

George Ennison, royal walnut larva, fossil wood from Texas.

C. Marvin, royal walnut larva, mink.

C. A. Sheppard, double apple.

Harry Chapman, elm sphinx larva.

Mr. Simons, star coral.

Harry Hopper, kingfisher, barred owl.

Dr. Robert Allyn, summer green snake.

Delia Caldwell, spider.

Frank Mead, Cobden, pelican.

S. Hewitt, marsh hawk.

W. O. Bryden, screech owl.

Robert Wylie, Marissa; weasel, skunk.

L. B. Rapp, Indian spoon or ladle, made from buffalo horn by the Sioux Indians of Dakota.

W. O. Jones, Cobden, chestnuts.

Joseph Miller, barred owl.

Susie Storm, horned toad from New Mexico.

Mr. McReynolds, barred owl, gray squirrel.

Chrissy R. Haldaman, cotton balls.

Willie Biggs, gray screech owl.

Walter White, crow.

F. M. Chanaberry, long eared owl.

Mr. Swaar, long eared owl.

Ted Thomas, short eared owl.

Charles Gilbert, pied billed gribe.

Abbie Lawrence, dove.

Nellie Sprague, cecropia cocoon.

Cynthia White, Waldo, Fla.; chameleon.

J. B. Crowell, crawfish, Harlan's hawk.
Thos. L. Donaho, rose from Florida.
Wm. Fligor, hen hawk.
W. B. Batson, chinquepins.
Mrs. Branson, two dynastes beetles.
Grace Winfrey, shell and mineral.
Arthur McGuire, luna moth, Virginia rail.
Crillon White, coot.
R. G. Sylvester, two sparrow hawks, Wilson snipe, golden plover.
G. W. Armstrong, weasel.
T. Thompson, Makanda; horned owl.
C. E. Hughes, sparrow hawk, brass Indian arrow head.
Seva Smith, water scorpion.
Percy North, humming bird.
Beckie Hindman, box turtle.
J. B. Bundy, luna moth.
Mrs. J. Robertson, orchard oriole.
P. P. Bennett, locust borer moth, Ajax butterfly.
Grant Duvant, DuBois; white mouse.
Thomas Johnson, luna moth.
George Brush, screech owl.
A. A. Hinkley, DuBois; several species of shells, Ajax butterfly.
Maggie Kennedy, silk worms.
Marcus Marvin, summer red bird.
John B. Borger, cecropia moth.
Mrs. Harwood, antiopa butterfly.
George Scurlock, brown thrush.
B. F. Crabtree, imperial moth.
Mrs. W. O. Jones, Cobden; a spider, fossils, birds, eggs and insects.

Very respectfully submitted,

G. H. FRENCH.

DEPARTMENT OF HISTORY.

Robert Allyn, LL. D., Principal:

DEAR SIR:—I have the honor to make the following report of the work in the department of History during the school year just closed:

FALL TERM.

CLASSES.	ENROLLED.
U. S. History, 2 divs., C	68
U. S. History, B	18
General History	14

WINTER TERM.

U. S. History, D	16
U. S. History, C	40
U. S. History, B	65

SPRING TERM.

U. S. History, D	15
U. S. History, C	16
U. S. History, B	75
U. S. History, A	25
Civil Government	14

The pupils have in the main been interested in study and faithful in application to their work. The progress made, while not all that I could desire, has been gratifying, and has made my work a pleasure.

In addition to the classes taught, I have had charge of the Normal Hall an hour each day.

Respectfully submitted,

ESTHER C. FINLEY.

DEPARTMENT OF ARITHMETIC AND ALGEBRA.

Robert Allyn, LL.D., Principal:

DEAR SIR:—I have the honor to submit the following report of my department for the year ending June 10, 1886:

The whole number of pupils enrolled in the department during the year is as follows:

Number enrolled in Higher Algebra	38
Number enrolled in Arithmetic	331
Total number pupils enrolled	369

Below is an exhibit of the number of pupils in the different classes under my immediate charge during the Fall, the Winter and the Spring Terms respectively, together with the number of pupils passing grade:

	ENROLLED.	PASSED.
FALL TERM.		
Algebra, C—One Class,	36	25
Arithmetic, E—One Class,	18	13
Arithmetic, D—Two Classes,	86	31
Arithmetic, C—One Class,	40	22
Arithmetic, B—One Class,	33	23
WINTER TERM.		
Algebra, B—One Class,	32	24
Arithmetic, E—One Class,	16	9
Arithmetic, C—Two Classes,	81	15
Arithmetic, A—One Class,	40	30
SPRING TERM.		
Algebra, A—One Class,	24	19
Arithmetic, C—One Class,	44	16
Arithmetic, B—One Class,	42	21
Arithmetic, A—One Class,	29	21
Total Pupils in class and passing,	521	269

This shows that a little less than fifty-two per cent. of the class enrollment passed grade.

During the Winter Term I taught a class in Elocution, and during the Spring Term a class in Vocal Music.

	Enrolled.	Passed.
Elocution Class	19	14
Vocal Music—One Class	43	25
Total in classes and passing	62	39

A summary of my own work is as follows:

Pupils in Algebra Classes	96
Pupils in Arithmetic Classes	425
Pupils in Elocution Class	19
Pupils in Vocal Music Class	43
Total Pupils in Classes	583
Total Pupils passing grade	308
Total Pupils not passing grade	275

This gives about fifty-three per cent. of the pupils as passing grade.

I also had charge of the D Section in Spelling during the year.

All of this work required the six hours of time each day during the Fall and Winter Terms. During the Spring Term I had charge of the Assembly Hall the first hour, until the Elocutionary work with the Senior Class began, which occurred about four weeks before the close of the Term.

During the Fall Term Miss Inez Green assisted me by instructing a class of ten pupils in C Arithmetic, nine of whom passed grade.

During the Winter Term Miss Ella Hundley, a member of the Senior Class, assisted me by taking charge of a D Class in Arithmetic, numbering forty, of whom seventeen passed grade.

The Trustees employed Miss Mary Wright, of Cobden, Ill., a former graduate, to assist in the departments of Arithmetic

and Reading during the Spring Term. Miss Wright had charge of three classes in Arithmetic, as follows:

	Enrollment.
Arithmetic, E	15
Arithmetic, D	32
Arithmetic, C	35
Total enrollment	82

The Principal took charge of a B Class in Arithmetic during the Winter Term numbering forty-five.

The total number of class pupils in the department of Arithmetic and Algebra during the year commencing September 7, 1885, and closing June 10, 1886, was 698.

It is utterly impossible for one teacher to do justice to this number of students. The work of the department has steadily increased since I took charge of it, and this constant increase calls for an increase of teaching force. With a proper division of classes as to number, and pupils in a class, there is abundance of work for an assistant during the entire year.

While my work has been quite heavy, requiring some crowding to accomplish a fair degree of proficiency, yet I can say that I have enjoyed it, and the majority of students have manifested a growing interest in the work.

The usual work of the department was followed closely with continuous additions of new methods throughout each term. The effort has been to introduce something new into every recitation, thus sustaining the interest. Class criticism has been constantly encouraged and enthusiastically participated in by the students.

In leaving this department at the close of the present year, I feel that I leave one of the most important departments of the Normal. I have enjoyed the work for the three years just closed, and trust the interest in the department of Algebra and Arithmetic will not abate in the least.

Respectfully submitted,

SAM'L. M. INGLIS.

DEPARTMENT OF GEOGRAPHY AND ALGEBRA.

Robert Allyn, LL.D., Principal:

DEAR SIR:—The following is a summary of the work done in my department during the year 1885–6:

The number of students in this department has been large. The application and proficiency of the pupils, though not all that could be desired, have been very gratifying:

FALL TERM.

CLASSES.	ENROLLED.
Geography B	40
Geography C	50
Geography D	15
Algebra, E	30
Arithmetic, D	14

WINTER TERM.

Geography, C	30
Geography, A	25
Geography, B	39
Geography, D	15
Algebra, E	36
Algebra, D	23

SPRING TERM.

Geography, B	30
Physical Geography	34
Geography, C	30
Geography, A	33
Geography, D	12
Geography, D	18

Total number of pupils, 464.

The A and C Geography in the Winter Term coming in conflict, I was compelled to give the D class, for one-third of a

term, in charge of Miss Clara Cleland, one of the pupil teachers. Miss C. proved herself a very efficient teacher.

Owing to the number of classes, I was unable to take charge of the beginning class in Algebra. It was placed under the care of Prof. Parkinson. I did not find out the number enrolled. Most of the time during the winter and spring terms I had a class before school.

Respectfully submitted,

INEZ I. GREEN.

DEPARTMENT OF MODERN LANGUAGES.

Robert Allyn, LL.D., Principal:

Dear Sir:—Allow me to submit to you the report of this department for the scholastic year of 1885–6:

The number of pupils instructed was 170. In the Fall Term the number was 56; in the Winter Term, 64; in the Spring Term, 50.

There were four German classes and one French class.

The Beginner's Class in German, after having completed Reading and Writing, advanced as far as the declension of adjectives.

The Second Class finished the conjugation of softly inflected verbs.

The Third Class finished all declinable parts of speech, and made a fair beginning in strongly inflected verbs, besides attempting free expression of thought, translating from English

into German, and reading and analyzing many German compositions.

The Fourth, or most advanced class, completed the German Grammar, wrote a great many free compositions in German, and had many colloquial exercises. In fact, the better part of this class are able to express themselves with conscious correctness, keep up an easy conversation, read any easy German book, in which technical expressions are excluded, or any newspaper.

The French Class was a beginner's class, and completed fairly the work laid down for the First Term.

The class-books and methods of instruction have not been changed since my last report.

Respectfully submitted,

J. BENGEL.

TRAINING DEPARTMENT.

Robert Allyn, LL.D., Principal:

Dear Sir:—I have the honor to submit the following report for the year 1885–6:

FALL TERM.

Pupils enrolled	64
Pupil teachers employed	13

WINTER TERM.

Pupils enrolled	59
Pupil teachers employed	17

SPRING TERM.

Pupils enrolled	63
Pupil teachers employed	18

The exercises of the day opened at 9:00 a. m., and closed at 2:15 p. m.; our program allowed 15 minutes for opening exercises and 15 minutes for closing; the remaining time was given to study and recitation.

The pupil teachers, generally, began work in a timid manner, but a few days developed confidence in ability, and most of them made rapid improvements, and we think them much more capable of teaching in our public schools than before they took this course of work in the Training Department. We feel that we can heartily recommend to the public all who have taken the year's work and finished it.

I did not do quite as much of the teaching this year as last, and was, therefore, able to do more of the work assigned to Principal and Assistant; that of overseeing and helping the pupil teachers.

Respectfully submitted,

ALICE KRYSHER.

DEPARTMENT OF PENMANSHIP AND DRAWING.

Robert Allyn, LL.D., Principal:

Dear Sir:—I have the honor to submit the following report for the year just closing:

I took charge of the Department of Drawing and Writing on the 6th of September, 1885. During the three terms of the school year I have taught 11 classes in drawing with 297 pupils, and 9 classes in writing with 337 pupils, making a total of 20 classes with 634 pupils.

In common with the other departments we have had the disadvantages of a small room and crowded classes, so it has been almost impossible to accomplish the best work, but notwithstanding the inconveniences the students have, for the most

part, worked faithfully and well. More attention has been paid to free-hand perspective, as illustrated in object drawing, than to any other branch, and an effort has been made to teach the principles underlying all drawing.

Undoubtedly much more could have been accomplished if the classes had been better graded.

Drawing is becoming so important a branch in many schools that the necessity for a systematic study of it in the Normal schools is evident.

In Writing, the object has been to teach a plain, simple style by means of a careful study of the forms of the letters.

Respectfully submitted,

TILLIE F. SALTER.

DEPARTMENT OF ARITHMETIC AND READING.

Robert Allyn, LL.D., Principal:

Dear Sir:—I have the honor of reporting the following summary of work as Assistant in these departments, during the term commencing March 22d and ending June 10th, 1886.

The enrollment by classes was as follows:

Arithmetic, C	35
Arithmetic, D	32
Arithmetic, E	15
Reading, C	7
Total	89

While the work has gone forward smoothly and quietly, the shortness of the term has made it difficult to complete the amount of work required.

Respectfully submitted,

MARY WRIGHT.

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